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Resident Physician

February 1958, Vol. 4, No. 2

Contents

Articles

50 What About Your Income Tax?

60 Guest Editorial

63 Clinico-Pathological Conference

76 University of Oregon Hospitals and Clinics

92 Renaissance in Otorhinolaryngology

102 Language Problems of Foreign Physicians

119 The House Staff Role in Undergraduate Medical Education

123 Medical Ethics and Etiquette

130 Surgery and the Law

146 Licensure for Foreign Graduates

150 Washington Report

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*Reifenstein, E. C., Jr., in Harrison, T. R.: Principles of Internal Medicine, ed. 2, New York, The Blakiston Company, Inc., 1954, chap. 98, pp. 702, 703.

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Contents

Resident Physician

Departments

17 Viewbox Diagnosis
What does the film tell you?

21 Resident Relaxer
A diversion with a purpose—see how you do.

26 Letters to the Editor
Questions and comment by readers.

47 Editor's Page

158 Mediquiz
Working alone or with your colleagues, you'll do well to get nine out of ten correct.

165 Leads and Needs
Practice openings; residency opportunities.

170 Advertisers' Index
Companies whose products and services are advertised in this issue of your journal.

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Resident Physician

February 1958, Vol. 4, No. 2

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Articles are accepted for publication with the understanding that they are contributed solely to this publication, and will directly interest or be of practical value to resident physicians. When possible, two copies of the manuscript should be submitted. Articles with photographs, illustration or drawings are especially desired.

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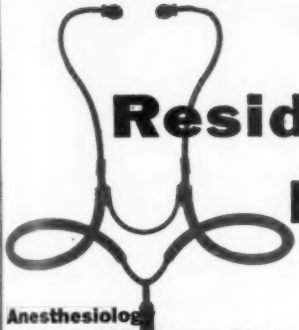

Resident Physician

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1. Birnberg, C.H., and Abitbol, M.M.: Obst. & Gynec. *10*:366, 1957.

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Viewbox Diagnosis

Edited by Maxwell H. Poppel, M.D., F.A.C.R.,
Professor of Radiology, New York University College of Medicine
and Director of Radiology, Bellevue Hospital Center

What Is Your Diagnosis?

1. Carcinoma of the cardia
2. Carcinoma of the esophagus
3. Cardiospasm
4. Peptic esophagitis

Answer on page 170

topical antibiotic therapy in its most convenient form

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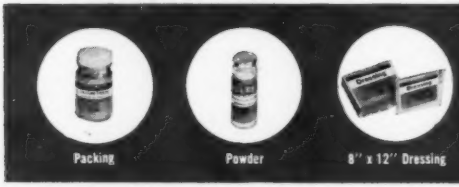

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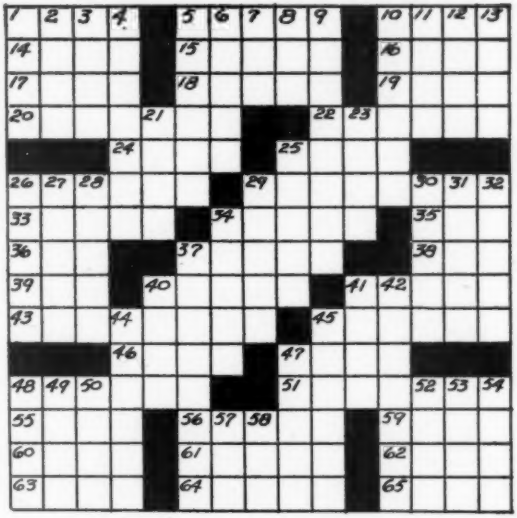
Resident Relaxer

(Answer on page 170)



ACROSS

1. Where vessels enter organ (plural)
5. Of short duration
10. Oil used in skin diseases
14. Ependymal thickening above the calamus scriptorius
15. A dwarf
16. The technic name of an organ or of a species
17. You get one from the dietitian
18. Two-winged insects
19. ——berry; Actaea
20. Rupture or distention of a blood vessel
22. Hard substance enveloping the crown of a tooth
24. Science dealing with rocks (abbr.)
25. Pertaining to the rectal exit
26. Histologic colors
29. A phosphorized substance occuring widely in the body
33. Webs
34. Plastic surgeons have to do this
35. Exist
36. —— serrata; the serrated endings of the ligament of the lens and the retina
37. Digs from the earth
38. ——legs; rachitic sign
39. Padding for examination table
40. What the old-time country doctors used to make rounds in winter
41. —— Bernard; dog used to rescue travellers
42. Ideas by words or signs
43. Inability to express
45. Sticky substances
46. Internal (prefix)
47. Welshman
48. Folds of peritoneum
51. Fine grade of Turkish tobacco
55. Partially fermented barley-seed
56. ——'s position; head dependent over the end of the table
59. ——'s Ascending Process; Scarpa's Fascia
60. Any space with boundaries
61. Relating to the outer membrane of the brain and spinal cord
62. The way you want your coffee or tea, if not hot
63. 50, double it, times 10, back to 50 again
64. Indurated
65. One of the Mayo Brothers (abbr.)

DOWN

1. ——'s Lobe; of prostate
2. Wild goat in the Alps
3. River flowing into Arctic Ocean
4. Internal fat of the body
5. Combining form meaning blood vessel (pl.)
6. A tube
7. One (Lat.)
8. Famous Egyptian King (colloq.)
9. Inherent qualities of drugs
10. Hard, heavy metal
11. —— Ulcer; a form of phagadena common in the tropics
12. Unit of force
13. 13th and 12th letters of the alphabet
21. Genetic Determiner
23. Horny lamina covering the terminal phalanx of each finger and toe
25. Mosquito
26. The mouth
27. A monster
28. Winged
29. Long (L. fem.)
30. Disposition
31. An odorous principle from orris root
32. Salamanders
34. Red oxide of lead (L. dat.)
37. Brassicae
40. Gasp for breath
41. Any union of a base with an acid
42. Having no directive tendency
44. Pertaining to the chin
45. The kind of expectoration from Laennec's Catarrh
47. Free from dirt or impurities, as a hospital must be
48. Trichlorphenol
49. The refuse of fruit after extraction of the juice
50. An ultimate constituent (abbr.)
52. ——'s Eruption; a morbilliform eruption following the injection of tuberculin
53. Mental image
54. Increases the quantity
57. ——patient; one treated at but not detained in a hospital
58. In a very busy doctor's waiting room or a hit play (abbr.)

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and inflammation with

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salicylate benefits with minimal salicylate drawbacks

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Reference: 1. J.A.M.A. 158:386 (June 4) 1955.

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Comprehensive control of constipation with Doxan . . .

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★ Results in soft stools gently stimulated to evacuation . . . and restores normal bowel habits

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Letters to the Editor

Unsigned letters will neither be published nor read. However, at your request your name will be withheld.

Helpful

I wish to express my gratitude in receiving your journal during the past two years as resident at the Grant Hospital in Chicago. As a foreign graduate, I found your journal extremely helpful and informative. Your publication has been deeply appreciated and I have looked forward to all issues since I have found it to be without any prejudices. I realize it may be an imposition, but I would like to continue receiving the publication when I start practice for myself in Obstetrics and Gynecology in January. Thanking you for past considerations, I remain,

A. Luciv, M.D.
Youngstown, Ohio

Baby Budget

I recall you ran a piece some time last year in which a resident's wife described some clever maneuvers to cut the costs of a new baby. If possible, I would appreciate receiving a reprint of the article. I am the wife of a psychiatric resident at Hillside Hospital and expecting a baby in the spring. I would certainly like to take advantage of the suggestions offered by the article in question. Thank you very much for your attention.

Mrs. Bernard Cohen
Great Neck, N. Y.

• *Congratulations! Reprint on the way.*

Smokers and non-smokers

In reviewing your paper on smoking ("Doctors Have Changed Their Smoking Habits"), I note there are no percentages given concerning those who were "smokers" as compared to those who were "non-smokers." Is it possible that you have such figures? If so, I would very much like to have them to supplement my information on the sub-

—*Continued on page 32*

e new purified injectable penicillin-
e, NEUTRAPEN, aborts penicillin reac-
ns. Current therapy—antihistamines,
CTH or steroids—treats effects.
EUTRAPEN counteracts the cause by
utralizing the penicillin itself, there-
offering a new concept of treatment
d the promise of safer penicillin
erapy.

nicillin levels at zero 4 to 7 days[1,2] The
tion of NEUTRAPEN is specific, rapid
d long-lasting. Its effect in inactivat-
g circulating penicillin has been
own to occur within an hour after
jection, and to continue for four to
ven days.[1,2]

ighly effective"[3] NEUTRAPEN effected
rompt and complete clearing of reac-
ons in 45 of 52 cases reported by Zim-
erman.[3] When given in the first month,
ne injection of NEUTRAPEN usually
eared the reaction in 12 to 96 hours.
ecker[4,5] noted complete clearing of
rticaria and angioedema within 24 to
2 hours in 42 of his 46 patients. The
bsence of relapses was termed "a major
inical achievement...."[4] Minno and
avis[6] reported complete clearing in all
cases studied and were "...impressed
ith the prompt relief of itching which
as noted in nearly every case...."

ell tolerated[1-7] On the basis of phar-
acologic studies, Chen and his co-
orkers[2] found NEUTRAPEN to be
..virtually nontoxic, even at dose
vels several hundred times the mini-
um effective dose." Clinically,
EUTRAPEN has been shown to be well
lerated when used intramuscularly.[6]

ay be lifesaving In the immediate type
anaphylactic reactions, NEUTRAPEN
ould not have time to be effective, but
may be lifesaving in those which oc-
r in an hour or several hours after
jection of penicillin.[4,5] In such cases,
ecker states, NEUTRAPEN "...may be
great benefit, and may be given intra-
enously as well as intramuscularly.
ith rapid inactivation of the offending
tigen followed by supportive therapy
it is felt that many or all of these
tients could be salvaged. For this
reason, and from these studies, penicil-
linase [NEUTRAPEN] should be kept on
hand in every doctor's office or hospital
where penicillin is administered."[4]

indications *Therapeutic:* NEUTRAPEN is indi-
cated in all cases of penicillin reaction ex-
cept the immediate type of anaphylactic
reaction.

Prophylactic: When drugs and vaccines
(notably poliomyelitis vaccine) which con-
tain small amounts of penicillin are given,
it is recommended that NEUTRAPEN be
administered concurrently to patients
(1) who are known to be sensitive to pen-
icillin, and (2) who have a history of
allergy.

Differential Diagnosis: In summarizing his
experiences with NEUTRAPEN, Zimmerman
suggests that its "...response may be con-
sidered a useful tool in the differential diag-
nosis of eruptions where penicillin is only
one of several possible inciting allergens."[3]

dosage and administration NEUTRAPEN, 800,000
units I. M., injected as soon as possible
after symptoms of penicillin reaction ap-
pear. If necessary, dosage may be repeated
at 3-day to 4-day intervals. In anaphylactic
reactions 800,000 units should be given
intravenously as soon as possible and im-
mediately followed by 800,000 units intra-
muscularly.

contraindications and side effects No specific
contraindications. Some soreness at the
site of injection, which may be accompa-
nied by erythema and local edema, may be
noted in some patients, but it is transient
and not serious. The intravenous use of
penicillinase has been reported to cause
chills and fever in some cases.

supplied NEUTRAPEN is supplied in single-
dose vials containing 800,000 units of puri-
fied injectable penicillinase as lyophilized
powder. It is stable at room temperature
in the dry state.

references: (1) Becker, R. M.: New England J. Med.
254:952, 1956. (2) Chen, J. Y. P.; Bard, J. W., and
Balsito, A. A.: Antibiotics Symposium, Oct. 3, 1957.
In press. (3) Zimmerman, M. C.: Antibiotics Sympo-
sium, Oct. 3, 1957. In press. (4) Becker, R. M.: 106th
Ann. Meet., A.M.A., New York, N. Y., June 5, 1957.
(5) Becker, R. M.: Antibiotics Symposium, Oct. 3,
1957. In press. (6) Minno, A. M., and Davis, G. M.:
J.A.M.A. 165:222, 1957. (7) Davis, G. M.: Discussion,
Antibiotics Symposium, Oct 3, 1957.

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SchenLabs

SCHENLABS PHARMACEUTICALS, INC.
NEW YORK 1, NEW YORK

—*Continued from page 26*

ject of smoking and cancer. I am also interested in these percentages by age groups.

William McVeigh, M.D.
Ann Arbor, Michigan

• *Figures requested are tabulated below:*

SURVEY NUMBER I
RESIDENT PHYSICIANS

NON-SMOKERS
As a % of RP survey group = 45.77%
SMOKERS
As a % of RP survey group = 54.23%

Age Group	% of Age Group who were smokers (each group = 100%)	Age Group (% of all RPs in survey)
20-29	69.78%	55.44%
30-39	34.51	39.03
40-49	39.13	3.97
50-59	42.86	1.21
60-69	0.0	.35
70 & over	0.0	0.0

SURVEY NUMBER II
GENERAL PRACTITIONERS

NON-SMOKERS
As a % of GP survey group = 32.21%
SMOKERS
As a % of GP survey group = 67.79%

Age Group	% of Age Group who were smokers (each group = 100%)	Age Group (% of all GPs in survey)
20-29	91.67%	3.11%
30-39	75.22	29.27
40-49	74.19	40.16
50-59	49.40	21.50
60-69	47.62	5.44
70 & over	0.0	.52

Missed Article

I follow each issue of your publication with much interest. I have watched for any articles that pertained to the Ob-Gyn man's equipping his office. Has there been such an article that I have missed? If so could I obtain a reprint, as none exists in our library. Thank you for your trouble.

N. B. Livingston, Jr., M.D.
Ohio State University
Columbus, Ohio

• *Published in* RP — *January 195*
Reprint on the way.

Licensure List

As a foreign graduate of Paris University in 1928, I am interested in your publication of licensure requirements for foreign trained physicians and would be most grateful to get a complete listing when it is ready . . . Could you furnish me a copy of the requirements for the State of Connecticut?

S. T. Yuen, M.D.
Boston State Hospital
Boston, Mass.

• *A copy of the May '57 issue containing the requirements for the State of Connecticut is on the way. For complete listing, see answer to letter below.*

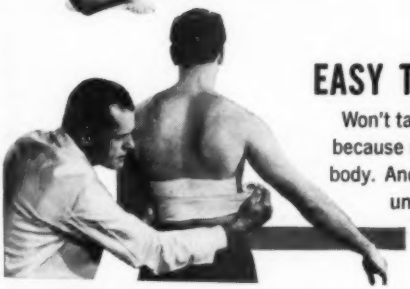
I am a resident physician at the Holzer Hospital in Gallipolis, Ohio and have received the book RESIDENT PHYSICIAN in which there is an article entitled "Licensure for Foreign Graduates." If at all possible, I would like to receive all past issues

—*Concluded on page 3*

THE EASY ADHESIVE

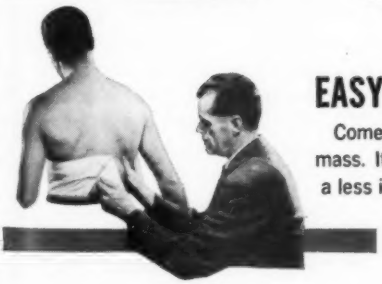
EASY TO UNWIND

Just pull gently... and new Curity adhesive unwinds easily. Clear to the end of the roll. No waste.



EASY TO APPLY

Won't tangle when you handle it, because new Curity adhesive has proper body. And it sticks and stays stuck... until you take it off.



EASY TO REMOVE

Comes off clean, leaving no sticky mass. It's kind to skin. You can't put a less irritating adhesive on a patient.

NEW Curity ADHESIVE

BAUER & BLACK

Division of The Kendall Company

—Concluded from page 32

of these articles. If I cannot get the articles separately, then I would like to receive the books in which these articles appear. Please advise me if this can be done.

Conrad Bodenstedt, M.D.
The Holzer Clinic
Gallipolis, Ohio

• *Sorry, our supply of back issues of* RESIDENT PHYSICIAN *is exhausted. However, "Licensure for Foreign Graduates" will probably be combined into a single article (in tabular form) in the very near future. As a resident physician you will automatically receive this issue of our journal.*

Names and Ethics

. . . You have Welsh. Sure you don't mean Welch?

R. O. Lemoyne, M.D.
Jacksonville, Florida

Welch by any other name is not so sweet. . . .

T. Davis, M.D.
Rochester, N. Y.

• *Pardon our typo. We were referring to Dr. William H. Welch, of course. Our thanks to the many other sharp-eyed readers who spotted the error.*

Galen Really Said . . .

. . . In referring to Galen's writings, you have him comparing himself to Trojan the road builder of the Roman Empire (RP January 1958). Actually, the last Trojan to hit Italy was by legend, one Aeneas. He came by ship and didn't do a damn thing for the Roman antidepression highway program. Trajan, the emperor, is the boy you want!

Name withheld at the request of the writer

• *A horse on us and a pox on our proofreaders. It seems that even the fame of emperors is fleeting.*

Indirect Help

Recently, I passed successfully the examination before the Illinois State Board and I want to thank you for your indirect help and encouragement. As many other residents, I found your "Mediquiz" section very useful—I read every issue from cover to cover.

Thanks again.

Jose J. Llinas, M.D.
State Hospital
Westboro, Mass.

Perrin H. Long, M.D.

Editor's Page

Medical Ethics and Etiquette

The subject of medical ethics and etiquette has seriously stirred the English-speaking profession for more than one hundred and fifty years. To be sure, Hippocrates and other physicians of Antiquity, the Middle Ages, and the Renaissance have dealt seriously with the question of medical ethics and etiquette. This is well evidenced by the administration of the Hippocratic Oath to graduating students in many medical schools over the centuries. (I often wonder why the Oath should not be administered on entrance to medical school.)

However, it was not until the end of the Eighteenth Century that a squabble among the doctors in a hospital in Manchester, England, brought about a penetrating review and formulation of ethics and etiquette in medicine, and then a treatise on the subject by the thinker and physician, James Percival, whose dissertation remains the foundation material for all discussions of this subject, even to this day. Chauncey Leake has written pungently and excellently on this

topic in his book, "Percival's Medical Ethics," which should be read by all physicians.

One of the criticisms of the "Principles of Medical Ethics" of the American Medical Association is that it does not distinguish between ethics and etiquette. Ethics is currently defined as "the science of moral duty, broadly, the science of ideal human character" or, "moral principles, quality or practice." In other words, medical ethics has to do with the relations between the doctor and his patient, and the doctor and the public (State).

Etiquette is defined as, "the forms required by good breeding, social conventions, or prescribed by authority to be observed in social or official life; the rules of decorum." It is obvious from this definition that medical etiquette is concerned with the relations of doctors, one to another, and of doctors to individuals in the auxiliary medical professions, and members of other learned professions; in other words, the conventions and rules which should govern the practice of medicine.

While it may be argued by cynics that, as the physician is faced daily with making decisions as to whether to act ideally in the interests of humanity, i.e., his patients, or in his own practical interest as a hedonist, I believe it can be said that evidence derived from the past hundred years indicates that *physicians as a group* act as idealists.

The use by physicians of every proven and acceptable agent for the prevention or cure of disease, and the constant and increasing search to add to these agents, shows beyond doubt that in our group-thinking we do not shun the thought of a world free from illness. One can well ask of the cynic: "Are any other

professions dedicated to the achievement of such a goal?"

The first code of ethics adopted by a legally constituted medical group in this country was adopted by the Medical Society of the State of New York in 1823, which was followed in this respect by the Medico-Chirurgical Society of Baltimore in 1832. The latter society gave ample credit to Percival; the former not much. In both instances the codes of ethics adopted were wholly similar, if not identical, with Percival's. However, in the organizational meetings of the American Medical Association in 1846, the question of ethics and etiquette in the practice of medicine loomed large, and a committee appointed to consider the matter brought in a report, in which its debt to Percival was fully acknowledged, entitled "Principles of Medical Ethics;" it was adopted by the Association in the annual meeting in 1848.

Since that time, circumstances have developed which made it necessary to reconsider the original "Principles," and over the last hundred years the House of Delegates, working with the Judicial Council of the Association, have given much thought to, and have made a certain number of revisions in, the "Principles." As a new revision was approved at the annual meeting in 1957, your editor thought it might be of interest to our readers to present the "Principles," section by section, with comment on each section. The first of this series of articles appeared in the January issue of RESIDENT PHYSICIAN.

Perrin H. Long.

It was as true . . . as turnips is.
It was as true . . . as taxes is.
And nothing's truer than them.

"David Copperfield"—DICKENS

What About Your Income Tax?

A tax expert shows you how a knowledge of basic tax rules and technics can save you dollars.

Joseph J. Berger, C.P.A.

THE stereotype of the physician in past years has been that of a man sophisticated in almost all facets of life but seriously lacking in business acumen.

Today, however, the physician is no longer regarded as a man innocent of financial affairs.

The plain fact is: *He just can't afford to be.*

What with taxes taking such a heavy toll, tight money, inability to establish a retirement fund, forced contribution of productive time to clinic work, and the normal demands of family expansion, the doctor must exercise greater perspicuity in the budgeting and handling of his practice income and accumulated wealth.

In the light of the present tax burden placed upon the doctor and his desire for preservation of his practice income and estate, the MD, of necessity, must acquire a working knowledge of tax matters and legitimate tax savings devices.

The average practitioner finds his tax problems more

complex each year. This may be attributed not only to changes in tax legislation but also to his ever increasing estate. His familiarity with taxes, however, was not acquired overnight; on the contrary, it developed out of the challenge each new problem presented during his many years in medicine.

Starting point

There is a logical starting point for the practitioner regarding the acquisition of tax know-how. He should begin to make his inquiries during the period of his internship and residency, the period in his life in which many of the readers of this article are now situated. To better acquaint the young house staff MD, therefore, this article is devoted to some basic tax rules and technics that should be considered in the tax planning of the salaried resident and intern.

Sources

Sometime before February 1, your employer, whatever hospital it may be, will have given you a form W2. This form will disclose your total salary for the preceding year and also the amount of income tax withheld from your salary, if any. You will need this information for the preparation of your income tax return should it be necessary for you to file one. To your salary you must add taxable income from other sources such as interest on savings, dividends, etc.

- *If the total of your gross taxable income, including your salary, is $600 or more, you must file a tax return.*
- If such income is less than $600, you need not file a return—but if you wish to reclaim *tax already withheld from your salary*, if any, you must file.
- If you are married and your earnings are less than $600 but the earnings of your wife exceed $600,

you should file a *joint return** with your wife, combining the individual incomes irrespective of whether or not any income taxes were withheld.

Exemptions

Every individual is entitled to a $600 exemption for himself and an additional $600 for each qualifying dependent. A qualifying dependent may be *generally* defined as an individual who:

- Has received more than half his support from the taxpayer.
- Is related either by blood or marriage to the taxpayer whether or not residing in the home of the taxpayer; or, is not related to the taxpayer but used the taxpayer's home as his principal place of abode and was a member of the taxpayer's household.
- Has gross income of less than $600 unless he or she is the taxpayer's child under 19 years of age or a student.
- If married, has not filed a joint return with his or her spouse.

A popular misconception that many taxpayers share is that excess credits for exemptions may be carried forward to subsequent years. The economics of present day remuneration to the intern or resident is such that the amount of salary represents nominal worth rather than true value. As you know, it is not unusual for an intern or resident to be married with possibly two children. He is entitled to $2400 in exemptions which, according to the average stipend, is in excess of his probable earnings from the hospital. This excess cannot be used as an additional deduction in the following year. For all intents and purposes, the benefits of these unused deductible dollars are lost to the taxpayer and his family.

Personal expenses

The taxpayer is entitled to deduct from his income many personal expenses he may have incurred during the year. These expenses include contributions to qualified organizations, interest, some taxes, medical and dental expenses, casualty losses, thefts, and unreimbursed expenses paid by the resident or intern for the direct benefit of the hospital.

There are certain limitations to several of the previosuly mentioned expenses. In general, the deduction for payments to charitable organizations may not exceed 20% of the taxpayer's gross income.**

Medical, dental

In general, medical and dental ex-

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* A *joint return* is a declaration of the husband and wife setting forth their *combined* income, expenses, and exemptions. The graduated tax rates are lower and generally afford savings through the "split income" provisions extended to married taxpayers filing a *joint return.*

** Where there are contributions to churches, tax exempt educational institutions or hospitals, or certain medical research organizations, the deduction may increase to 30%.

penses can be deducted only for the portion that exceeds 3% of gross income. *The total deduction must not exceed $2500 multiplied by the number of exemptions.* In addition, the following maximum limitations are applied:

- $5000 if the taxpayer is single; or if married, files a separate return.
- $10,000 if the taxpayer is married and files a joint return.

Unless decisions are rendered within a few months by the tax courts to the contrary, an MD who aspires to enter the field of psychiatry, may deduct the costs of his psychoanalysis. This expense may be in excess of the aforementioned limitations if the taxpayer is unmarried and has no dependents.

Other expenses

The resident and intern must also consider some expenditures he incurs which are peculiar to his profession, are necessary to his work, and which are deductible. Many residents and interns, although in a constant impecunious state, are expected to support and be active in medical societies and their functions. The monies spent as dues for these societies are deductible expenses.

Disbursements to various governmental bodies for licensing are also deductible as are premiums for malpractice insurance.

The resident in his last year at the hospital may become very much aware of his need to entertain in order to establish worthwhile contacts. He knows the importance of this time in his career when he is about to be completely dependent upon his neighbors, friends, and other members of his profession for referrals. They are the backbone, the strength upon which he can draw, in order to sustain himself during what may be a trying period in the years immediately ahead. This strength is an asset, acquired most times, through investment in planned and semi-planned entertainment.

It can be costly, especially to the resident who has exhausted all his reserve funds. Yet, the average physician will admit it to be a necessary adjunct to good medicine in order to get the winning combination for a successful practice.

If the taxpayer can show that these expenditures bear some direct or indirect relationship to the acquisition of patients, present or future,

About The Author

A Certified Public Accountant licensed by the State of New York, the author is a graduate in business administration from Pace College, New York City. A medical practice consultant for many years, he has had more than ten years of accounting experience and is presently an associate member of the Medical Business Bureau of New York City.

he may deduct the entertaining costs as a legitimate expense.

Books, equipment

Another expense applicable to all interns and residents—your medical library. May you deduct a portion of your cost, known as depreciation, on your tax return? Yes, but it isn't wise; although a deduction for depreciation of a medical library can be taken during the period of internship or residency, the tax benefits to be derived would be relatively small compared to those realized if the expense were deferred to a later period and the deduction taken while you are in a higher tax bracket.

This rule of thumb would apply as well to any medical equipment acquired during the period of internship or residency *if the value of the equipment is relatively stable,* such as with an EKG.

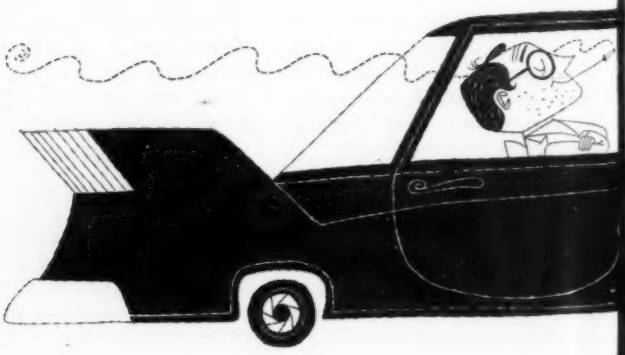
The individual must decide which is more important to him, an immediate saving of a low bracket tax or a deferred saving in a high bracket.

Car depreciation

Now, what about the depreciation on an automobile? This expense cannot be availed of by the resident or intern because you use your automobile almost exclusively to travel between home and hospital rather than using the automobile for the benefit of the hospital. The Internal Revenue Code specifically states that no automobile expenses may be deducted for "travel to and from work."

The beginning practitioner, however, may reflect the full benefits of this expense on his tax return. In such an instance, the physician should start deducting depreciation *immediately.*

This principle can be emphasized by an analysis of the distinction in classification between the automo-



bile and all other capital assets of the doctor. The most significant difference is the relatively *fast rate of obsolescence* inherent in the use and ownership of a car. (Other applicable assets will probably carry a useful life three or four times that of the automobile.)

Illustrative of the above is the following: Dr. Brown, during his first year in practice, purchased an automobile (with some assistance from his wife and parents) at a cost of $2800. The estimated useful life was four years; at the end of this time, it was further estimated, the automobile would have a salvage value of $400. The balance of $2400, when depreciated by Dr. Brown, apportioned an expense of $600 to each of the four years. Dr. Brown acquired the maximum benefits from the depreciation of his automobile.

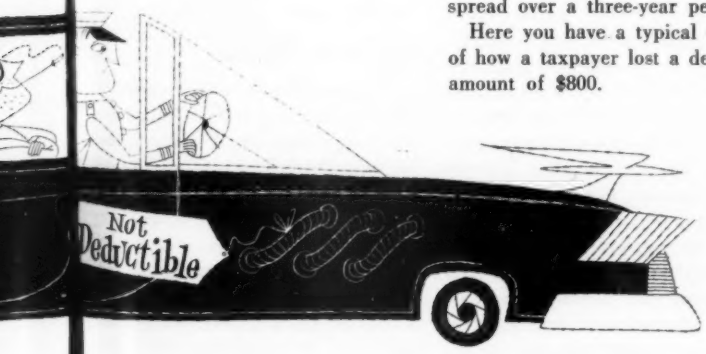
Another physician, Dr. Smith, purchased the identical model at the same time and cost. However, Dr. Smith reasoned that since he hadn't really made any money during the first year of his practice, he would not waste the depreciation expense on his first year tax return but would save it until the following year when he could spread the depreciable amount over three years instead of four. He reasoned further that from this treatment of the expense, he would reap additional benefits when in a higher tax bracket.

Straight line

Unfortunately, Dr. Smith is in for a shocking disappointment. His reasoning, with respect to asset valuations, did not conform to tax law or theory.

The automobile, although costing $2800 a year ago, is now worth only $2000. The salvage value remains the same but now, for tax purposes, the useful life of the car has shrunk to three years. After subtracting the salvage value of $400, the total depreciable amount is only $1600 spread over a three-year period.

Here you have a typical example of how a taxpayer lost a deductible amount of $800.



One further word regarding depreciation. Although numerous methods of calculating depreciation exist, the method best suited to long range tax savings for the beginning practitioner is the method known as "straight-line." The basis of depreciation in this method is to divide the depreciable value of the asset *evenly* over the useful life of the property—as was illustrated in the car depreciation examples.

Board and lodging

An area applicable to most salaried residents and interns is in regard to board and lodging. The value of meals or lodging furnished an intern or resident for "the convenience of the hospital" is not taxable income, whether or not the meals and lodging are provided as a part of compensation. With regard to meals, where the nature of the position requires that the employee reside on the hospital premises, the value of the meals is not taxable income.

With regard to lodging, the value thereof, may be excluded from taxable income *only if the employee must accept the lodging on the hospital's premises as a condition of his employment.*

In a situation where the resident or intern must pay for his meals, he may be guided by the following rule: an employee, unless the expense is incurred under a reimbursement or similar expense arrangement, generally may deduct the cost of his meals as an expense if he can show that the expenditure is required by his employment agreement or is incident to the performance of his duties.

Heavy Scrutiny

The Internal Revenue Service is well aware of the fact that a portion of the professional business income of physicians and surgeons is reflected in the flow of monies on a "cash basis."

Recognizing the inherent deficiencies of this method, from a control standpoint, the tax department earmarks MDs' tax returns for extra heavy scrutiny, frequent audits, and rigid specifications for norms and estimated expenses.

Physicians are advised to consider this fact in their record-keeping and reporting of income and expenses.

Standard deduction

The tax regulations provide for many allowable personal deductions, the most comon of which have been mentioned in this article. The Internal Revenue Code further permits an overall deduction of 10% of the adjusted gross income, *in lieu of all other personal expenses,* with a ceiling of $1000. This option is extended to all taxpayers whether salaried or self-employed, and is re-

ferred to as the "standard deduction."

It becomes apparent, therefore, that before preparing your tax return, it is necessary to compile a list of all allowable *personal* deductions excluding the personal exemptions. If the total of these allowable expenses exceeds the lower of $1000 or 10% of your adjusted gross income, you should itemize these expenses on your return. If the "standard deduction" of 10% should exceed your list of deductible expenses, the election of this optional method will save you dollars.

It will be noted that reference has been made to *personal* expenses. This reference is made for purposes of distinguishing the nature of the expense from *business* expenses. Both such expenses are deductible but in the instance where the taxpayer may wish to exercise his option to use the "standard deduction," he may also claim deductions for his business expenditures. The exercise of his option merely waives the taxpayer's right to deduct individual *personal* expenses.

Application of the above general principles to a specific set of facts will aid your understanding of the use of the "standard deduction."

Dr. Nokoff, a resident physician, analyzed some of his expenditures for the year as follows:

Interest on automobile loan	$ 70
Apartment rent	1,000
Orthodontia for daughter	150
Automobile expenses	300
Contribution—Amer. Cancer Committee	25
Malpractice insurance	175
State and city taxes	60
Apartment telephone, electric, etc.	200
Insurance on household effects	100
Interest on loan for household furnishings	30
Blue Cross	60
Medical journals	40

The extraneous items referring to non-tax matters may be omitted. They are:

Apartment rent	$1,000
Automobile expenses	300
Apartment telephone, electric, etc.	200
Insurance on household effects	100

The balance of expenditures are deductible personal expenses and are listed below:

Interest on automobile loan	$ 70
Orthodontia for daughter	150
Contribution—Amer. Cancer Committee	25
Malpractice insurance	175
State and city taxes	60
Interest on loan for household furnishings	30
Blue Cross	60
Medical journals	40
	610

W2 forms of the doctor and his wife showed combined income from salaries of $6000. For purposes of simplification in presenting the example, depreciation of the doctor's

medical library has not been considered.

Although we may prematurely accept his permissible deductions to amount to $610, as listed, we must first adjust his allowable medical expenses to reflect only that portion exceeding 3% of the combined gross income. The downward adjustment of expenses would amount to $180 (3% x $6000). Total deductible expenses now amount to $430 ($610 minus $180).

However, it should be noted that through the exercise of his option to use the 10% "standard deduction," the doctor may obtain a greater benefit since the total deduction for personal expenses would amount to $600 ($6000 x 10%).

The above was presented, basically, to illustrate the use of the "standard deduction." More than the original intent has been accomplished however, for even with a simple set of facts, it has been shown to the reader that complex variations may invade even the most rudimentary problems.

The most successful means of preserving a physician's assets and estate, is to effectively control and minimize the expenditures for taxes. The government extends to the individual many avenues for tax savings. Take advantage of these routes. Familiarize yourself with basic tax legislation and trends, for such knowledge may save you many dollars.

And lastly, analogous to the advice you would give your own patient do not apply the suggested prescriptions of other physicians. Each doctor's tax problems are different and individual. If in doubt regarding a tax matter, consult your accountant; if he is not available, inquire of the Internal Revenue Service.

Stipends

In a recent ruling by the Internal Revenue Board, stipends paid to interns and residents were held to be taxable compensation. (Rev. Rul. 57-386, I.R.B. 1957-35, 10.)

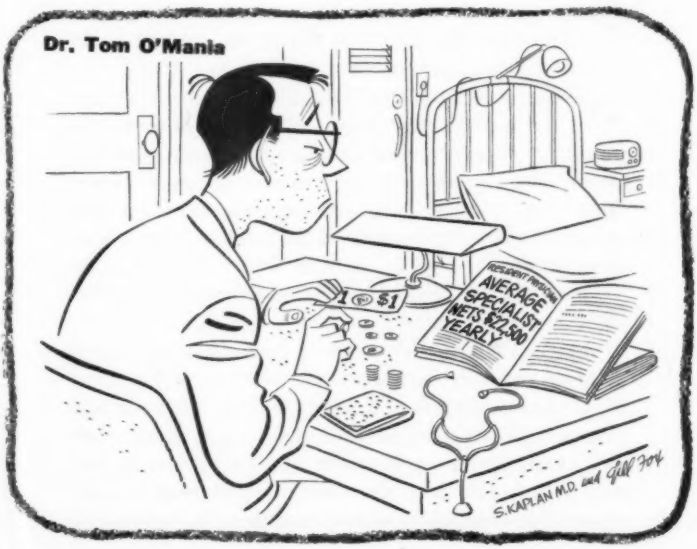
In part, the ruling states: "The training hospital has on its staff interns and resident doctors who receive stipends from the hospital. It is stated that modern medical education requires training beyond that provided by four years at a medical college. This additional medical education is provided by supervised general experience and training in hospitals. Such training is obtained by service of an internship. If on completion, the doctor desires to specialize in a particular field of medicine, it is necessary to serve a 'residency' under qualified supervision.

"The interns and resident doctors are appointed periodically and receive stipends from the hospital and some receive room and board. In the course of and as part of their training, all assist in the care of patients at the hospital.

"Section 1.117-4 (c) of the Income Tax Regulations provides, in part, that if any amount paid or allowed

to or on behalf of an individual, to enable him to pursue studies or research, represents compensation for past, present, or future employment services, or represents either payment for services which are subject to the direction or supervision of the grantor or research primarily for the benefit of the grantor, such payments or allowances shall not be considered as amounts received as a scholarship or a fellowship grant for the purpose of section 117 of the Code.

"The interns and residents in the instant case are primarily performing services for the hospital as physicians, even though, in the process, they are acquiring training and experience in their particular specialties. The stipends received under such circumstances represent compensation for services and do not constitute scholarships or fellowship grants within the meaning of section 117 of the Internal Revenue Code of 1954. Accordingly, such compensation is includible in gross income under section 61 (a) of the Code."



Jarvis Gould, M.D.

Guest Editorial

Responsibility is the Keynote

Of the many factors constituting the basis for a good medical graduate training program, one of the most important in the development of a young physician through internship and residency is the opportunity to assume responsibility. Of course, there are other factors important to the graduate training program: the competence of the staff, their interest in the professional development of interns and residents, a well-rounded program with available clinical material encompassing all of the medical specialties, and the necessary supporting services involved in the care of the patient. Comfortable, pleasant surroundings in which to work add to the enjoyment of the experience and to the relative contentment of employees and staff.

After many years of scholarly work amassing a great fund of knowledge in theory and practice, at the beginning of an internship it becomes important, through responsibility coupled with adequate supervision, to put this knowledge to work and to gain confidence in one's ability to handle properly many different medical problems. This confidence can only be gained by independent

JARVIS GOULD, M.D.
Assistant Medical Director
University of Oregon Medical School Hospitals and Clinics

thought and action and by being allowed to reach diagnostic conclusions and to initiate therapy accordingly, knowing that quiet supervision will prevent serious errors. Without real responsibility for patient care, an intern or resident is usually not inclined to think profoundly of the problems that face him.

Making the intern directly responsible for the care of all patients and prohibiting the supervisory staff, whether attending or resident, from writing orders directly for patient care is an important feature in organizing a good internship teaching service. This, in a way, prevents the supervising staff from inserting themselves between the intern and patient and in any way disrupting the doctor-patient relationship wherein the patient holds the intern responsible for his care. This also promotes the free discussion of therapeutic and diagnostic principles between the intern and his superiors. Here it might be pointed out that the ready acceptance and competent discharge of responsibility by the house officer is an excellent measure of his ability.

The resident physicians become truly consultants to the intern staff and as such the growth of the resident physicians is assured because they must supervise, instruct and search for the answers to the problems that are presented to them. As residents progress in their period of training, they should be allowed increasing increments of responsibility until by the time they are in their final year of training there is scarcely anything in the common practice of their specialty they have not

done themselves or are not capable of doing. When they have finished a training program with such gradually increasing responsibility, they are confident of their abilities and aware of their limitations. Such a status will put them in an excellent position to give conscientiously the best possible care to their future patients with the knowledge of what they may safely do and the ability to recognize when it is necessary to seek appropriate consultation.

Tuition Free Conference on Edema

Residents and interns have been invited to attend, tuition free, a special three-day postgraduate conference, "Edema—Its Pathogenesis and Management," to be held March 13-15 at the University of Colorado Medical Center, Denver, Colorado.

Said to be "of particular value" to those residents preparing for their boards, the Edema Conference will be devoted to basic considerations and clinical applications of kidney function, edema, and diuresis, with special emphasis on treatment.

Participating with members of the Colorado faculty will be S. Howard Armstrong, Jr., Professor of Medicine, University of Illinois; Russell R. deAlvarez, Professor of Obstetrics and Gynecology, University of Washington; John H. Moyer, Professor of Medicine, Hahnemann; George C. Schreiner, Asst. Professor of Medicine and Director of Renal Laboratory, Georgetown University Medical Center, and Arnold V. Wolf, Chief of Renal Section, Department of Cardiorespiratory Diseases, Walter Reed Army Medical Center.

Further information and a detailed program may be obtained from the Office of Postgraduate Medical Education, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver 20, Colorado.

Clinico-Pathological Conference

University of Oregon
Medical School, Hospitals and Clinics

This was the third Multnomah County Hospital (MCH) admission of a 72-year-old white male. Born in Yugoslavia, he had worked as a machinist and a coal miner.

First MCH Admission—February, 1955: Incision and drainage of periurethral abscess. At this time, a history of chronic productive cough since 1925 was obtained. Sputum usually white, occasionally blood-streaked. He had noted moderate dyspnea on exertion for 6-8 months. Chest x-ray findings were abnormal. A small, hard left supraclavicular node was biopsied and exhibited anthracosis. Indirect laryngoscopy revealed a fixed left vocal cord, and bronchoscopy revealed hyperemia and edema of all bronchial radicles. A presumptive diagnosis of bronchiectasis was made and the patient was discharged.

Second MCH Admission—October 3, 1956: Patient re-admitted with complaints of increasing dyspnea which was more marked in the preceding 3 months. He had noted a weight loss of 15 pounds during the past year, but denied night sweats or fever. He denied edema, orthopnea, palpitation, and chest pain. Cough was unchanged; claimed hoarseness had its onset in 1935.

PE: BP 160/100; P 100 regular; R 22; T 98.4°.

EENT: Hoarse voice, no neck vein distension.

Chest: Hyperresonant with weak vesicular breath tones. Sibilant and sonorous rales heard bilaterally. Diminished breath sounds, tactile fremitus, and resonance at both posterior bases.

Heart: Not enlarged; no murmurs; normal sinus rhythm.

Conference Participants

Morton J. Goodman, M.D., Assistant Clinical Professor of Medicine

Charles T. Dotter, M.D., Professor and Chairman, Department of Radiology

I. C. Brill, M.D., Associate Clinical Professor of Medicine

Daniel H. Labby, M.D., Associate Professor of Medicine; Director, Division of Diabetes and Metabolism

Donald M. Pitcairn, M.D., Assistant Professor of Medicine

Nelson R. Niles, M.D., Assistant Professor of Pathology. The CPC was prepared by Dr. Niles.

Abdomen: Bilateral inguinal hernias, reducible. No masses, fluid, or tenderness noted.

Prostate: Enlarged firm left lobe.

Extremities: No edema.

Neurological: No abnormalities.

Despite a venous pressure of 9 cm of saline, the circulation time (decholin, 20 sec) (soduxin, 15 sec) was prolonged. A gallop rhythm was noted on exercise and the patient was digitalized. The following day, 1400 cc of clear amber fluid was removed from the right pleural cavity. The patient responded well and became less dyspneic. A urologic consultant felt that the patient had ureteral obstruction, but the patient refused diagnostic procedures and was discharged 10/17/56.

Third and Final MCH Admission —October 25, 1956: Patient readmitted with increasing dyspnea. Recurrent right pleural effusion noted and right thoracentesis yielded 750 cc of clear amber fluid. Thereafter, little fluid could be obtained. On 11/1/56 a routine EKG revealed changes indicating acute anteroseptal infarction. Blood chemistries were compatible with renal acidosis. On 11/4/56 patient suddenly became unresponsive. A small amount of dark red blood was passed per rectum and 200 cc of bright red blood was aspirated from the stomach. Before blood was available, the patient expired.

Laboratory

Hematology:
Hgb. 11.6 – 9.8
WBC normal
ESR 3/51 – 10/53

Urine:
Sp. Gr. 1.010
WBC + to + + +
RBC occ. to + +
Protein + + to + + +

Pleural Fluid:

Protein	— 20 gms/L
Cells	— 123/cu.mm.
Lymph	— 100%

Sputum, urine, pleural fluid for AFB — negative on culture.

Serology: positive (treated 1935)

Serum 11/1/56:

Na	— 129 meq/L
K	— 4.7 meq/L
Cl	— 110 meq/L

CO_2 — 15 meq/L

BUN:

48 — 45 mg.%

Total Protein 6.3 gms.%; albumin 4.8 gms.%; globulin 1.5 gms. %. Acid phos.—3 units.

Radiology

Chest: 2/11/55 — Increased hilar density with fine markings radiating to periphery.

10/3/56—Lung fields as previously noted; slight increase in heart size; right pleural effusion.

10/9/56—Peripheral radiolucency right mid-lung field. Possible right lower lobe pneumonitis.

10/29/56—Clearing of right pleural effusion. No radiolucency noted.

Barium Enema: Normal.

IVP: Insufficient visualization.

Retrograde Pyelography: Normal collecting system.

Anthracosis

Dr. Morton J. Goodman: This 72-year-old man was admitted to the hospital for drainage of a periurethral abscess in February, 1955. He died 21 months later with cardiac and pulmonary insufficiency and an upper gastrointestinal hemorrhage.

He was suffering from several maladies which converged on him and finally overwhelmed him. He was a coal miner and obviously had anthracosis. The node which was removed was loaded with coal dust. The radiologist reported diffuse fine markings throughout the lungs which were compatible with anthracosis. I do not believe he had much silicosis.

Anthracosis is now considered to be a specific disease and not a silicosis variant. The lesions are quite different. In anthracosis, coal dust is deposited around the terminal bronchioles, and produces an inflammatory reaction with patches of focal emphysema. These are often small but in aggregate, they can produce the clinical picture of extensive obstructive emphysema. In such cases, the pulmonary fibrosis and emphysema may show very little on the x-ray even though severe clinical disability is present. The diseased areas are masked by layers of normal lung. This is not the case in silicosis, where the reverse is often true: extensive nodular and fibrotic changes may be present with very few or no symptoms.

The absence of extensive pleural fibrosis speaks against silicosis. This patient apparently had a free pleural space in which he was able to accumulate large amounts of fluid.

Pulmonary heart disease

In addition to pulmonary insufficiency, he had a failing heart. Chronic pulmonary heart disease was in all probability present though we see no clear support in the electrocardiogram. Right ventricular hypertrophy, however, can be present with no electrocardiographic evidence, especially if left ventricular hypertrophy or associated left ventricular failure is present. We are told that shortly before death, the tracing

showed evidence of a fresh anterior wall infarction.

Could we see the electrocardiograms at this point? Dr. Brill, would you like to comment on the tracing?

Dr. I. C. Brill: When I read the protocol I felt reasonably sure of the presence of cor pulmonale. However, when I looked at the electrocardiogram I was disappointed.

There was nothing in the tracing to suggest right ventricular hypertrophy: the R-waves were low over the right precordium and tall over the left; there were no S-waves in V_5 or V_6; the T-waves were upright in the right precordial leads and inverted in the left. These findings are the reverse of what might be expected in cor pulmonale.

In general, the changes in the electrocardiogram are indicative of diffuse myocardial damage such as is seen in generalized chronic occlusive coronary atherosclerosis. There are also some changes indicative of acute myocardial injury; I refer to the marked elevation of the S-T segments in V_3 and V_4 which are characteristic of acute anteroseptal infarction. The changes, therefore, are those of acute myocardial injury superimposed on old chronic myocardial disease due to ischemia and probable multiple small healed infarctions.

Dr. Charles T. Dotter: Does your interpretation imply that cor pulmonale may be excluded from consideration?

Dr. Brill: No. Electrocardiographic changes characteristic of cor pulmonale afford a high probability—better than 90 percent—that right ventricular hypertrophy exists. However, the reverse is not true: the absence of electrocardiographic evidence of right ventricular hypertrophy does not exclude the existence of this lesion.

Dr. Daniel H. Labby: Is there anything you can think of offhand that might mask cor pulmonale in the presence of acute coronary occlusion?

Dr. Brill: Changes due to infarction per se do not necessarily obscure the electrocardiographic signs of cor pulmonale. However, dilatation and hypertrophy of the left ventricle which are frequently associated with coronary disease and acute myocardial infarction may so balance the electromotive forces as to mask the evidence of cor pulmonale.

Dr. Goodman: May we see the x-rays now, Dr. Dotter?

Chest films

Dr. Dotter: Our interest in this patient centers primarily on the chest films. Done almost two years ago, x-ray examination of the chest reveals rather voluminous lung fields with flattened, depressed diaphragmatic domes. The lungs show multiple, generally-distributed, nodular-appearing, increased densities which seemed to be more prominent centrally. The build-up of total density toward the hilar regions would sup-

port the diagnosis of a pneumoconiosis such as silicosis.

The hilar shadows, themselves, are increased in density and size consistent with hilar lymphadenopathy like that seen in pneumoconiosis. Unsupported by serial observations or knowledge that the patient had been a miner—which he had—these findings could be properly regarded as suspicious of so-called 'lymphangitic' metastases from a G.I. tract carcinoma. Nevertheless, in this case, we've got almost a two-year interval observation period and that virtually excludes malignancy as cause of the diffuse nodularity of the lungs.

In addition, early and later films reveal areas of fibrotic-appearing densities in the left upper and mid-lung fields. Probably this represents an area of incompletely regressed pneumonia. There is, incidentally, an old fracture of the left clavicle.

Retrograde pyelogram

Before going on to the more recent chest films, I might mention that a barium enema was normal and comment on the retrograde pyelogram done during the month preceding death. In discussion about this case, the question of pyelonephritis has been raised—I don't think there is any radiological evidence of pyelonephritis.

The intravenous urogram shows diminished function; as a matter of fact, it's almost impossible to point to contrast agent in the collecting systems. The retrograde, however, shows pretty normal calyceal architecture. Admittedly, it is possible to have pyelonephritis without radiological changes, but the relatively normal renal architecture on this retrograde study argues against the existence of long-standing chronic pyelonephritis.

The left ureter is unusually tortuous and a loop of it is projected apparently out of the confines of the pelvis. I have no explanation for this.

To return to the chest films: By the time the patient came in, about a month before death, bilateral pleural effusion had developed — more marked on the right side. There was, apparently, considerable reduction in the volume of the right lung, probably as a result of the accumulated fluid. It is difficult to be certain, but there has probably been interval increase in the size of the heart.

Subsequent films show reduction in the total amount of fluid, but continue to show exaggeration of central pulmonary markings. It's impossible to exclude a number of diagnoses such as bronchogenic carcinoma or pulmonary granulomatoses such as Boeck's sarcoid or Wegener's granulomatosis.

In summary, then, I believe the chest films support a diagnosis of chronic pneumoconiosis superimposed on pulmonary emphysema and chronic or recurrent pulmonary in-

flammatory disease. At the time of admission, the pleural effusion and increased heart size signify the presence of heart failure, presumably due to cor pulmonale.

Pleural fluid

Dr. Goodman: The pleural fluid had rather unusual features. One would have anticipated a simple transudate associated with congestive heart failure, but we are told that the protein content was 20 grams per liter, and I have just been told that the fluid clotted spontaneously. Twenty grams is high for a simple transudate due to heart failure. However, if transudates are present for some time, water may be reabsorbed more rapidly than solids with the result that the protein content is increased, and eventually approaches that of an inflammatory exudate.

Spontaneous coagulation, due to the presence of fibrinogen, likewise suggested the presence of an exudate rather than transudate. He may have had both. If so, I can't explain the low cell count.

I saw this patient on the ward and also in the chest clinic. All observers were concerned with the possibility of neoplasia. I recall that alveolar cell carcinoma, bronchus carcinoma, or a widespread lymphangitic type of metastatic carcinoma, were suggested. The clinical course and laboratory evidence of extension from prostatic cancer was lacking. Tuberculosis seemed satisfactorily ruled out.

There was little to support the presence of some more unusual lesions such as Hamman-Rich syndrome, Wegener's granulomatosis, and so forth. He did have an obstructive uropathy, showed some bladder trabeculation, and probably had chronic pyelonephritis. This would seem the most likely explanation of the renal failure and the blood chemical changes of acidosis.

Other comments

He had syphilis which I am told had been adequately treated in 1935, at least by the accepted therapeutic standards of that era. I think this infection played no role whatever in his terminal illness. The serology was still positive which is not necessarily a sign of treatment failure. The positive serological reaction may remain for life in spite of adequate treatment. The paralyzed vocal cord in a patient with syphilis would immediately suggest to older clinicians the presence of syphilitic mediastinitis or aortic aneurysm. There is no evidence of either here. I do not know why his left vocal cord was fixed. It apparently had accounted for hoarseness for at least 30 years.

I would like to comment briefly on a few other points presented in the protocol. He is said to have had a normal venous pressure reading, and prolonged arm-to-lung and arm-to-tongue circulation times. These simple bedside procedures carefully

performed and properly interpreted are helpful in understanding the nature of circulatory disturbances. The delay in the arm-to-tongue time is to be expected in diminished cardiac output of left ventricular failure which this patient obviously had. The prolonged arm-to-lung time suggests right sided failure.

The normal venous pressure is difficult to interpret. One might wonder about the accuracy of the reading. Venous pressure is always elevated in right-sided heart failure — which I am sure this patient had. Abdominal compression is a helpful maneuver in demonstrating elevated venous pressure. In patients with right heart failure, pressing on the abdomen will raise the venous pressure 20 cm or more.

The terminal episode of bleeding from the stomach or duodenum must have been due to peptic ulceration, possibly of a stress nature. There was no antecedent ulcer history, nothing to suggest the presence of varices or other lesions in the esophagus.

In summary, I feel that this patient had anthracosis with pulmonary fibrosis and chronic bronchial infection; chronic pulmonary heart disease; coronary artery disease with coronary thrombosis and myocardial infarction; obstructive uropathy due to urethral obstruction, and subacute or chronic pyelonephritis with renal failure; peptic ulceration with hemorrhage.

Dr. Daniel H. Labby: Dr. Pitcairn, would you give us the results of your meeting with the senior class?

Discussion summary

Dr. Donald M. Pitcairn: We had a lively discussion and a number of interesting possibilities were raised. I think that the general pattern of our discussion followed pretty much that of Dr. Goodman's.

Because of limited time for discussion this morning I think we can only highlight some of the problems and summarize the general feeling of the class.

There were certain difficulties, I think, in this protocol. First of all, it was a little difficult for us to reconcile the physical findings in the chest and the implication, I think, that this man had obstructive pulmonary disease, with the CO_2 combining power of 15 meq. With any degree of obstructive disease one would not expect to see a lowering of the CO_2 combining power but an elevation. The class resolved this discrepancy by a majority conclusion that the subject did not have obstructive disease.

The question of whether this man was in failure was raised, of course, and there was no unanimity of opinion about this point. Approximately half the class felt that he did have congestive failure, and that this represented failure predominantly of the right heart, i.e., cor pulmonale.

We had a little difficulty with the

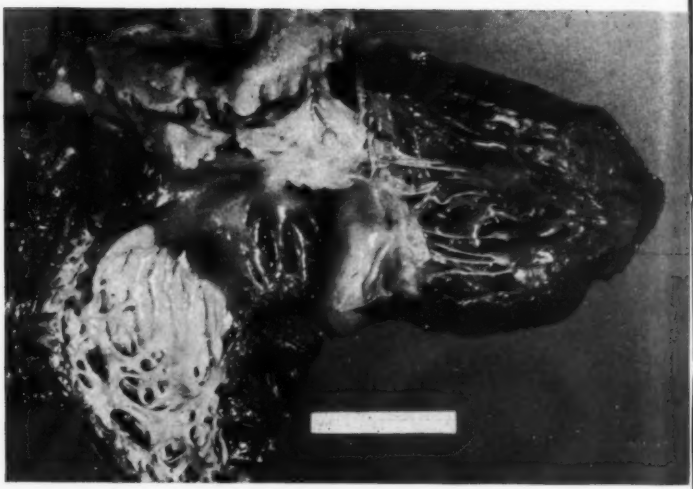


Fig. 1 View of opened left ventricle showing extensive old anterior septal infarct.

circulation time, but I think one has to remember that the circulation time is not equatable solely with velocity of blood flow; this measurement reflects both velocity of blood flow and compartment volume or 'pool size.' Neither of these two factors can be separated by meaning in this measurement of circulation time. A prolonged arm-to-tongue time and a normal arm-to-lung time are inconsistent. I think that the class all felt that he had coronary artery disease and a recent myocardial infarction.

The nature of his renal disease presented a problem. The class was unanimous in feeling that he had chronic renal disease. Most of the class felt that this was pyelonephritis in all probability; in other words, we could not account for this being simply glomerulonephritis because of the persistent pyuria both in voided specimens and on specimens obtained at ureteral catheterization from right and left pelves of the kidney. A few thought that this represented a chronic glomerulonephritis; several raised the question of tuberculous disease of the kidneys.

The class was unanimous in feeling that the terminal episode of bleeding represented a stress ulcer or agonal bleeding from the gastric mucosa.

It was the apparent feeling of the house staff that he was in failure,

since he received digitalis, but only on his last admission did he receive diuretics. At no time in his hospitalization did he receive a low salt diet. We could not reconcile these therapeutic inconsistencies.

As for the nature of the chronic pulmonary disease, most of the class felt that this was essentially fibrotic in character; something in the order of anthracosis or silicosis; a small percentage felt that this was obstructive disease in the sense of obstructive emphysema. Approximately 10 percent of the class felt that there was a pulmonary neoplasm, about 5 percent thought that there was chronic pulmonary suppurative disease such as bronchiectasis.

We considered the possibilities of a pulmonary embolism or extension of a myocardial infarction as the ultimate cause of death. Only 10 percent of the class felt that death was due to exsanguination.

Pathology

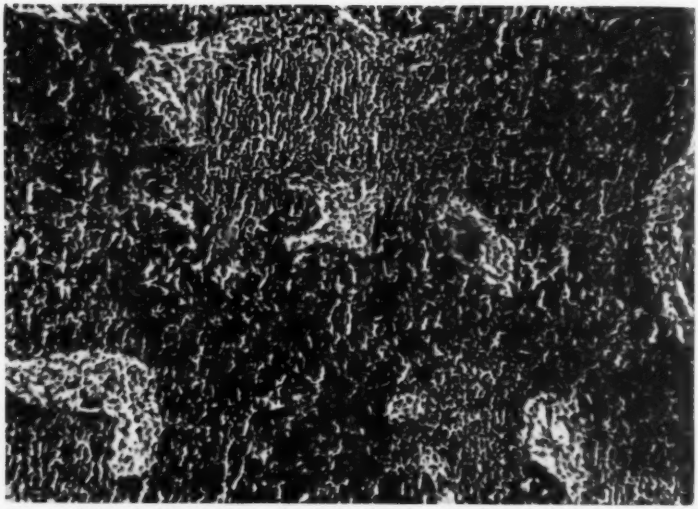
Dr. Nelson R. Niles: I think the cause of death was exsanguination; this fresh clot was found in the stomach — amounting to more than 750 cc — and the small and large bowel had likewise a large amount. The lesion accounting for it in the stomach wall is rather poorly defined with slight thickening of the wall, and its nature isn't quite clear on a purely gross examination.

Microscopically there is an erosion of the mucosa from this area and many dilated blood vessels are present near the surface, some involved by the necrosis and a very good site for bleeding. This is what we might call an acute 'stress' ulcer; it is not a neoplasm. But in contrast to most benign ulcers, stress or otherwise, this looks more like an inflammatory rather than a purely ulcerative lesion. I don't know if there is any significant difference, however.

The heart shows a rather large, old infarct in the interventricular septum and extending for a short distance onto the anterior wall of the left ventricle *(Figure 1)*. Many areas were examined throughout here for the possibility of any acute or recent lesion; I was unable to find one.

Various special stains reveal nothing in the way of any acute necrosis or degeneration of the cardiac muscle. Perhaps it is too early for us to be able to tell; usually it takes 18 or 24 hours to pick up histologically any sign of acute myocardial infarction and necrosis. Various histochemical stains and enzymatic studies are continually under investigation and some of them bring this margin of time down further but none of them will bring it down to the minute.

Similarly, I was able to find no recent coronary lesion at all, and I must conclude that this infarct has been there for some time. Whether or not there is an additional recent lesion, it has not made itself apparent. So I think one should not



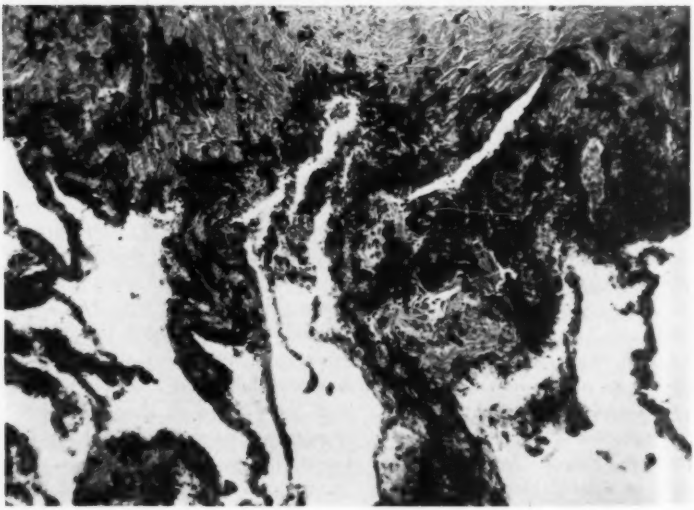


Fig. 2 (Above) Photomicrograph of the lymph node biopsy showing anthracosis but no fibrosis. (100X) Fig. 3 (Below) Photomicrograph of the lung showing anthracosis and fibrosis, the latter due to silicosis. (100X)

say on looking at an electrocardiogram that this is an acute or an old infarct; he can only say that this is an infarct. There is a big area of electronegativity, and when it first occurred I cannot say.

He had slight hypertrophy and dilatation of the right ventricular wall consistent with early cor pulmonale.

Another lesion of importance in this patient is the renal one. I call this a glomerulonephritis, and it has a somewhat varying histologic picture. Here we see a hypercellularity of the glomerulus and nothing else abnormal. But the walls of the capillaries are all rather fine and fairly distinct. As we go through the set of photographs, they become progressively fragmented, blurred, and scarred. In an intermediate stage of the same process are these areas of thrombosis and necrosis, with focal accumulations of granulocytes and destruction of the capillary walls. This affords a good clinical explanation for the findings on microscopic examination of the urine. Here is an old scarred glomerulus. Therefore, this process is both acute and chronic — perhaps a little more on the acute side.

The aorta showed a good deal of arteriosclerosis and a small saccular aneurysm in the abdominal portion, which is of no immediate significance here. There are also a number of areas of anthracotic pigmentation in nodes along the course of the aorta. The liver and the spleen showed a great deal of anthracosis. These organs are really, in the fresh state and fixed as well, a definite bluish color. On microscopic examination this is coal dust.

Here is a photomicrograph that might be taken from the liver or the spleen for the amount of anthracotic material that is present; it did happen to be from the supraclavicular lymph node that was biopsied *(Figure 2)*.

Again we have a lot of anthracosis outside the lungs. By polarized light no doubly refractile material is seen in the tissue; therefore, *this* is not silicosis.

Both lungs are very anthracotic; also they show a lot of emphysema with numerous blebs. The same gritty texture is apparent throughout the entire pulmonary parenchyma; this is a diffuse process with a little nodularity in it. Anthracotic pigment is visible even on the mucosal surface of the right mainstem bronchus, and would have been worth noting at bronchoscopy. In the lung itself is a great deal of pigment with some increase in connective tissue and thickening of the walls of many of the vessels; I felt there was a great deal of obliterative arteritis, a good cause for cor pulmonale.

This pulmonary process is fibrous, and, as such, is typical of silicosis *(Figure 3)*. Silicotic material is easily demonstrated here by polarized light. The diagnosis then is pulmonary anthracosilicosis. Pul-

monary effusion — 1800 cc — was present on the right side at the time of autopsy and I believe this to be the result of heart failure.

I think this diagnosis can be made clinically because of the large amount of anthracotic material outside the lungs. If coal dust is to be found in a supraclavicular lymph node, in the liver, or in any other organ outside the thoracic cavity, it must indicate some degree of mediastinal lymphatic obstruction. And when the history is as long as this, with 20 years of recurrent nerve paralysis, in a miner, the diagnosis is almost necessarily silicosis.

ANATOMIC DIAGNOSIS: Marked pulmonary anthracosilicosis with emphysema. Localized acute superficial gastritis with acute massive hemorrhage into stomach and small and large bowel:

Right pleural effusion (1800 cc)

Subacute glomerulonephritis

Marked coronary arteriosclerosis with old occlusion of left anterior descending branch and old myocardial infarction of interventricular septum

Marked generalized arteriosclerosis with saccular aneurysm of lower abdominal aorta

Generalized arteriolar sclerosis, systemic and pulmonary

Marked anthracosis of cervical, thoracic and adbominal lymph nodes, liver and spleen.

Dr. Brill: Dr. Niles, your finding of an old extensive antero-septal infarct without evidence of an acute or recent lesion merits additional comment with reference to the electrocardiogram. Marked elevation of S-T segments as in this case is usually indicative of acute injury. However, occasionally such changes may be associated with an old infarction, especially when aneurysmal dilatation of the scar is present. The only way an acute muscle injury can be diagnosed with certainty is when rapid evolutionary changes can be demonstrated by serial tracings. The electrocardiographic pattern of ventricular aneurysm remains fixed and permanent; that of acute myocardial infarction undergoes rapid daily changes.

Dr. Labby: Dr. Niles, do you have any explanation of how the anthracotic pigment gets below the diaphragm?

Dr. Niles: I think it must be absorbed through the lungs and into the lymphatic pathways but cannot be deposited in these nodes that are fibrotic and must be diverted to sites other than the normally expected drainage areas.

Dr. Labby: I think there has been a little bit of confusion in the way the data was presented this morning in regard to what happens to the circulation time. In a patient who has congestive heart failure on the basis of arteriosclerotic heart disease and possibly cor pulmonale, the question might be asked what will happen to circulation time if anemia is also present? After all, cor pulmonale, arteriosclerotic heart

disease and congestive heart failure may tend to slow the circulation time. Can such a heart respond with a high output imposed by the anemia, Dr. Pitcairn?

Circulation time

Dr. Pitcairn: The so-called high output failure of anemia, I think, has been demonstrated to occur only when the hemoglobin approaches about 7 grams. As to whether a heart which is in failure because of myocardial disease and insufficiency can respond with an increased output to anemia, I cannot answer with any certainty since there are so many variables which have to be considered and there is insufficient time for this in this exercise.

I have serious reservations about the utility of the circulation time as it is applied clinically. Too frequently we accept it if it 'fits' our clinical impressions, and reject it as a faulty test if it does not square with the other clinical information that we have obtained.

I have no objection to its use if it is recognized that it is measuring two variables—velocity of blood flow and compartment volume — neither of which is separable in the clinical application of this test.

Great Lever

The main cause of this unparalleled progress in physiology, pathology, medicine and surgery has been the fruitful application of the experimental method of research, just the same method which has been the great lever of all scientific advance in modern times.

—WILLIAM H. WELCH, M.D.

("Argument against Antivivisection Bill"
—U.S. Senate, February, 1900)

UNIVERSITY OF

"... The building was erected with funds provided out of the private purses of the faculty. It was a small affair, and though hardly equal to the demands of even a small class, it answered its purpose for a year or two, when an addition was built for increased attendance ..."

Thus did a Portland newspaper describe the embryonic University of Oregon Medical School some ten years after it was granted its charter by the Board of Regents of the University of Oregon.

In the fall of 1887, instruction began in this frame building of two rooms just 28 years after the State of Oregon had been admitted to the Union. With expanding educational, service and research programs, the University of Oregon Medical School moved in 1919 from its downtown Portland site to its present 108-acre location in beautiful Sam Jackson Park. On a tree-clad campus which overlooked the City of Roses and beyond to the snowcapped Cascade

one of a series from leading hospital centers

A new 14-story teaching hospital combines with county and other affiliated hospitals to offer 28 interns and 68 residents a broad range of clinical experience in 17 specialties.

TY OF OREGON

Hospitals and Clinics

mountain range, the institution had "breathing room" and was offered the opportunity for almost unlimited expansion. And although the early history of the institution was not without its successes, its greatest period of growth has come in more recent years.

In 1942, a young and forward-looking dean—the fourth in the School's history—was appointed as chief administrative officer of the University of Oregon Medical School, Hospitals and Clinics. Admirably equipped for the task, Dr. David W. E. Baird brought to the institution a background as an internist in private medical practice, and years of experience as hospital administrator, teacher and medical investigator. From the outset he and other administrators observed that if the Medical School was to keep abreast and surpass others in the nation, a number of things would have to be achieved.

First, the institution needed a full-time clinical faculty, and with

this faculty would come a need for additional finances for medical research.

The institution's buildings, though substantial, were not particularly well-equipped nor designed for the rapid advances taking place in medical education and patient care. Expansion and renovation would have to take place.

And of tremendous importance was the need for a teaching hospital where educational and research programs could be integrated with services to patients.

Faculty

Through outstanding leadership and the availability of state funds since the close of World War II, the University of Oregon Medical School today stands at the pinnacle of its 70-year history. The institution now has 80 full- and part-time faculty members in its basic and clinical sciences.

Assisting the full-time faculty are more than 400 volunteer clinical faculty members from the Portland area who through the years have been the backbone of the institution's instructional and service programs.

The Medical School's income from gifts and grants—chiefly dedicated for some 90 separate research projects—amounts to more than $1 million annually.

University Hospital

Dotting the U.O.M.S. campus are 14 buildings, valued at more than $20 million. And among them, rising from a steep canyon at the heart of the

iversity of Oregon Medical School
d hospitals shown in aerial view with
w 14-story teaching hospital in center.

campus, is the new 14-story University of Oregon Medical School Hospital. Long a dream of faculty and administrators alike, this teaching hospital became a reality in 1956 when it opened its doors for patient care. Included in the structure's 272 beds are 128 beds for medical and surgical patients, 31 beds for psychiatric care and 113 beds for pediatrics.

On the occasion of the hospital's dedication, the president of the Oregon Board of Higher Education summed up the purpose of the building, and the philosophy which has been the guiding principle throughout the School's distinguished history:

"With the completion of this new hospital, the Medical School will now be able to extend its clinical facilities to the entire state. For the first time the profession as a whole

Below is another view of teaching hospital (right) with enclosed bridge to medical science buildings at left.

The changing scene—a histology class picture taken in 1918 when the Oregon Medical School was located in downtown Portland.

will be able to refer to this great medical center their patients who have special problems or require services not available at other places. Here to the great group of medical experts who make up the teaching staff may be referred, by his attending physician, any patient, rich or poor, who needs this service, the only condition governing being that his examination and treatment shall be of value in teaching the art and science of medicine and that payment for such service shall be in accordance with the economic means of the patient.

"This presents a wonderful opportunity for every doctor in the state to make his contribution to medical education by cooperating with the hospital and referring those cases needed for teaching purposes. Thus, through student education, through graduate and postgraduate work, through research and service rendered through the hospital, all of the citizens of the state will be benefitted equally."

Multnomah

But the new teaching hospital is only a part of the over-all campus expansion which has taken place since 1919. That year saw the construction of the School's first building in its new location, the Medical Science building. With later additions, it has been modernized and houses student classrooms, laboratories and research facilities. Next came the erection of the 310-bed Multnomah Hospital which meets the medical needs of indigent county patients in the Portland area. A new

PG courses draw doctors from the Northwest, Canada and Alaska to Oregon's 600-seat auditorium. Lectures and CPCs are also held here.

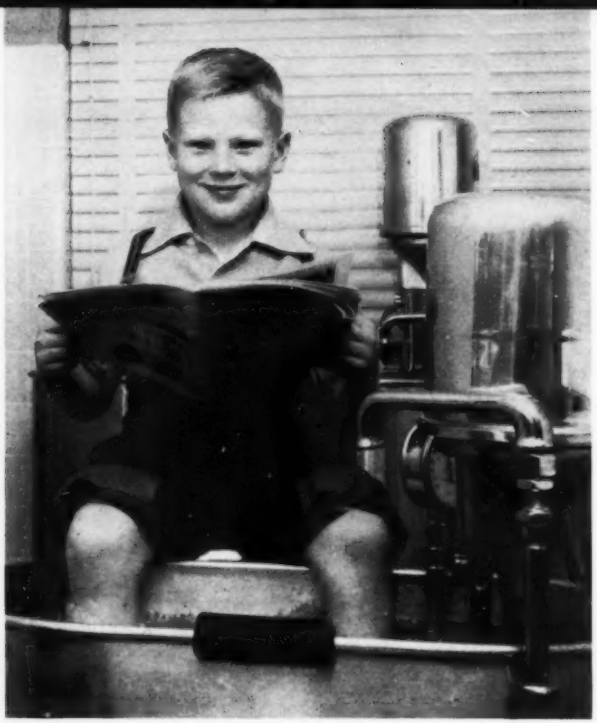
wing was added to the building in 1950.

The former Doernbecher Memorial Hospital for Children, built in 1926, has provided excellent care for sick and disabled children; a completely new 113-bed Doernbecher Hospital (pediatrics) is now housed on the two top floors of the teaching hospital, and the old building has been modernized and made a part of the institution's outpatient clinic, added to the campus facilities in 1931. The clinic is open to patients statewide who are financially unable to obtain medical care elsewhere.

Library

The year 1939 saw the completion of two new construction projects: The 80-bed University State Tuberculosis Hospital admitted its first patient that year (with its outpatient clinic, it is one of three state-operated tuberculosis hospitals in Oregon), and a beautiful Medical School Library and Auditorium building at the west end of the campus.

The library quickly became the center of reading for medical students, faculty members, nurses and Portland physicians, and presently serves as a central loan library for doctors throughout the Pacific Northwest. The library contains more than 60,000 bound volumes and receives nearly 1,100 periodicals monthly. With its handsome study and conference rooms, and with the 600-seat auditorium adjacent to it, the building provides excellent facilities for lectures, scientific meetings and seminars.



Boy, whirlpool bath and Mickey Mouse comics. Crippled Children's Division charts road to recovery for clinic patients.

VA facility

Located near the geographic center of the campus is the Laboratory and Administration building. Built in 1949, it furnishes additional facilities for basic science departments and the Medical School's administrative offices. In order to carry out more effectively a statewide program for crippled children—a function of the Medical School since 1917—an administrative building for the Crippled Children's Division was constructed in 1954.

Two major building projects were completed in 1956. One was the already mentioned University of Oregon Medical School Hospital, constructed at a cost of more than $6 million; the second was a $2½ million structure to house the University of Oregon Dental School. The latter, a modern facility for the

long-established Dental School in Portland, provides an outstanding physical plant for educating future dentists. Adjacent to the Medical School campus, is the U. S. Veteran's Administration Hospital of 565 beds. It serves as a teaching unit of the Medical School.

Nearly 25 years ago, all of Oregon's state-operated institutions of higher learning were combined by an act of the legislature into a State System of Higher Education, operated under a nine-member lay board with a chancellor as the chief executive of the system. Although th Medical School, because of its location in a different city than other divisions of the University, has administrative and faculty autonomy, the academic position of the School as an integral part of the University of Oregon is established in its charter and is recognized under the organizational plan of the Oregon State System of Higher Education.

Cardiac catheterization in the new teaching hospital. Residents have an opportunity to learn modern techniques.

Teaching programs

Instruction in the Medical School includes a standard curriculum for undergraduate medical students, graduate work in the basic sciences, and training for interns and residents. Enrollment of undergraduate medical students is about 300. An important activity of any medical center is postgraduate instruction. The University of Oregon Medical School is no exception, from 12 to 15 separate courses in various medical specialties are offered to physicians each year, with registration tallying close to 600 annually.

The School also has a curriculum in nursing education, including both an undergraduate curriculum and advanced programs for graduate

Dr. D. W. Baird, dean of the Medical School since 1942.

Below, Dr. C. N. Holman (left), associate dean and medical director, checks blueprints with Dr. R. J. Gould, administrator of Multnomah Hospital.

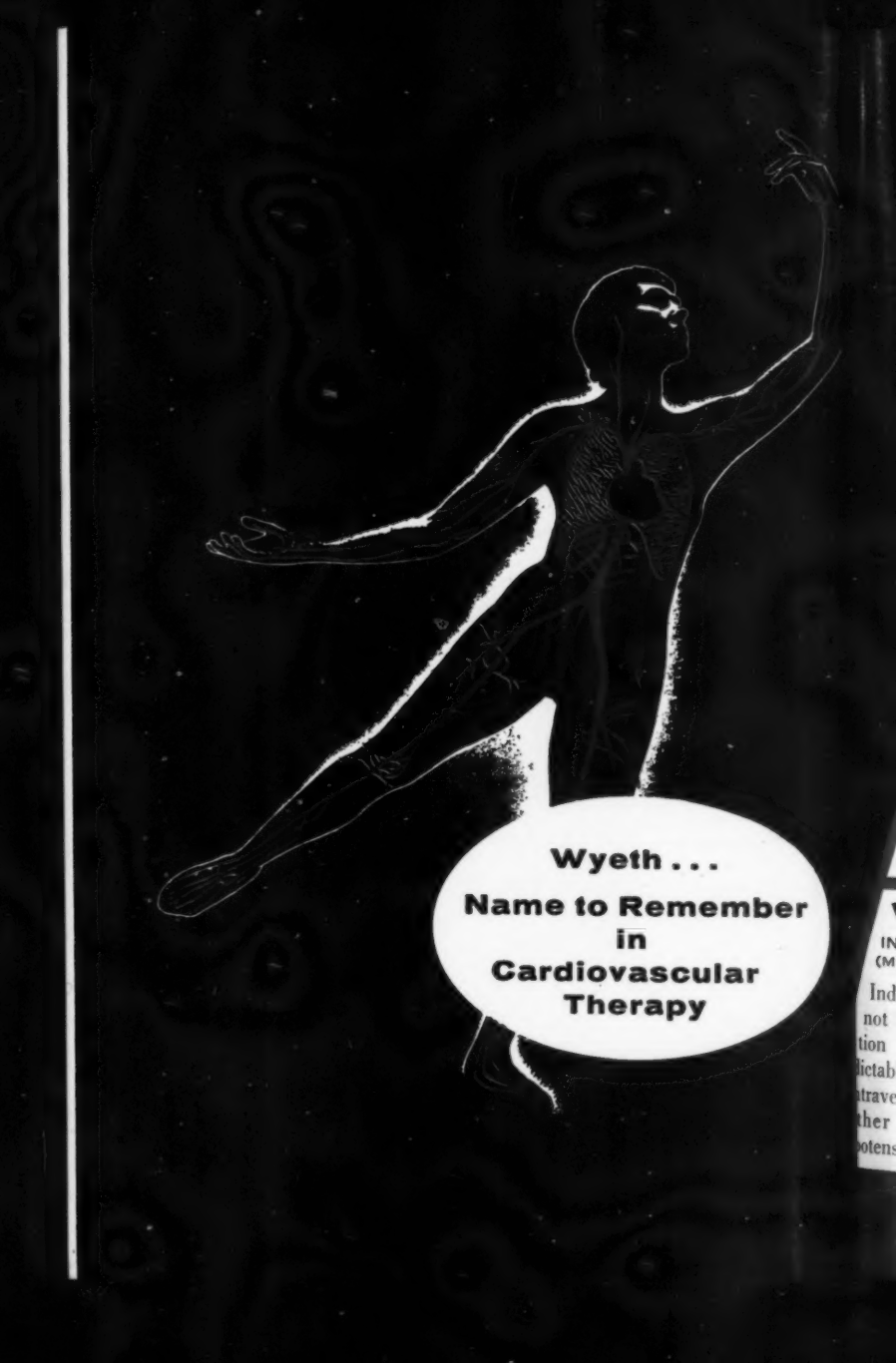
nurses. Enrollment in nursing education approaches 300. In addition to the programs for doctors and nurses, the School offers courses in medical technology and x-ray technique. Also available are clinical affiliations in dietetics and occupational therapy.

Carrying out the many facets of education, service and research at the institution calls for some 1100 employees and an operating budget each year of approximately $5 million. The bulk of this money comes from state appropriations.

The service load at the University of Oregon Medical School Hospitals and Clinics can best be illustrated through statistics taken from a recent report: total patients admitted to all hospitals was 8,506; number of hospital days amounted to 149,036; and visits to outpatient clinics totaled 123,002. During this period 887 births were recorded; 6,700 surgical procedures took place; 5,404 general and regional anesthetics were given; 3,465 pathological examinations were performed; and 234,016 laboratory and x-ray examinations were made.

All residency and internship ap-

Resident in ophthalmology checks young patient in Medical School's Eye Clinic.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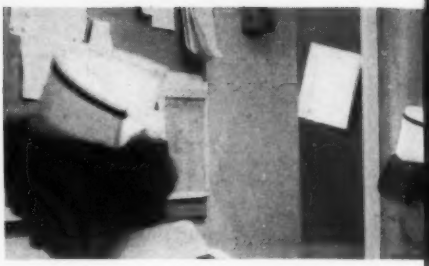


Residents exchange views at modern nursing station in U of O's new hospital.

pointments at U. O. M. S. are made through the medical director. Applications must be accompanied by recommendations from 1) the dean of the applicant's medical school, and 2) from the administrative head or chief of staff of the hospital in which the internship was served, if the application is for a residency. The institution maintains rotating internships of 12 months duration. Twenty-eight interns are appointed each year.

Training

All patients in the hospitals and clinics at the University of Oregon Medical School are house cases and are under the personal care of the intern who is responsible to the resident on the service. Each resident is under the supervision of the attending staff composed of full-time and volunteer faculty members.

The resident's responsibility is gradually increased as he progresses through his residency, and before his training is completed, he assumes the full responsibilities expected of a practitioner in the particular specialty. Interns and residents rotate through both the Medical School Hospital and the Multnomah Hospital—receiving experience in both institutions. The staffs in each of these hospitals are restricted to Medical School faculty members.

In a certain number of residencies, the resident will spend a portion of his time in affiliated institutions. For instance, residents in orthopedic surgery will have a year's service in the affiliated Shriner's Hospital for Crippled Children in Portland. In other services, residents may rotate for a period of time through the U. S. Veterans Administration Hospital, the Emanuel Hospital and the Good Samaritan Hospital, all located in Portland.

Living quarters

Interns and residents at the University of Oregon Medical School may live off the campus when off duty. However, every house officer

OREGON RESIDENCY PROGRAMS

SERVICE	CHIEF	RESIDENTS IN FIRST YEAR	TOTAL RESIDENTS IN TRAINING	PROGRAM IN YEARS
Anatomical Pathology	Dr. Warren C. Hunter	3	5	2
Anesthesiology	Dr. Frederick P. Haugen	3	6	2
Dermatology-Syphilology	Dr. Thomas B. Fitzpatrick	1	1	3
Clinical Pathology	Dr. Raymond D. Grondahl	1	3	2
Experimental Medicine	Dr. Edwin E. Osgood	2	2	1
General Surgery	Dr. William K. Livingston	1	6	4
Internal Medicine	Dr. Howard P. Lewis	0	6	3
Neurology	Dr. Roy L. Swank	0	0	1
Neurological Surgery	Dr. George M. Austin	2	3	5
Obstetrics-Gynecology	Dr. Ralph C. Benson	1	3	3
Ophthalmology	Dr. Kenneth C. Swan	2	6	3
Orthopedic Surgery	Dr. William E. Snell	3	8	4
Otorhinolaryngology	Dr. Guy L. Boyden	0	1	3
Pediatrics	Dr. Allan J. Hill	4	8	2
Radiology	Dr. Charles T. Dotter	1	4	3
Thoracic Surgery*	Dr. William S. Conklin	1	2	2
Urology	Dr. Clarence V. Hodges	1	4	4

* Prerequisite: 3 years of general surgery

Note: Some residencies at the UOMS are affiliated with the U. S. Veterans Hospital, the Shriner's Hospital for Crippled Children, Good Samaritan Hospital and Emanuel Hospital—all located in the city of Portland.

Medical Conferences

MONDAY
8-10 Staff Ward Rounds
4- 6 Special Ward Rounds — Problem Cases

TUESDAY
8- 9 Medical Staff Conference
9-10 Hematology Ward Rounds
1- 2 X-Ray Conference
2- 3 Diabetic Ward Rounds
3- 4 Neurology Ward Rounds

WEDNESDAY
8-10 Staff Ward Rounds
1- 2 Medical-Surgical Chest Conference
2- 3 Endocrinology Ward Rounds

THURSDAY
8- 9 Medical-Surgical Cardiology Conference
1- 2 X-Ray Conference
2- 3 Renal Ward Rounds
4- 6 Special Ward Rounds — Problem Cases

FRIDAY
8- 9 Clinico-Pathological Conference
9-10 Hematology Ward Rounds
1- 2 Pathology Conference
3- 4 Neurology Rounds

SATURDAY
8-10 Staff Ward Rounds

who is required to be on duty at night in any of the institution's hospitals is assigned a room which he may share with one other doctor. Unmarried residents and interns are assigned permanent living quarters in pleasant rooms in the hospitals. They also receive board and laundry.

All food on campus is cafeteria style, prepared attractively by expert dieticians, and may be eaten in faculty dining rooms adjacent to the main cafeteria in either the Medical School Hospital or Multnomah Hospital. Of special interest to the house staff is the fact that they may bring their wives and children to meals without charge on Sundays and legal holidays.

Because the Medical School is located in a primarily residential area of the city, a number of excellent apartments and private homes offer housing for married couples and children.

The Registrar's office at the Medical School maintains up-to-date listings of these nearby apartments and rooms along with any vacancies which might occur during the year. However, it may be to the resident's advantage and liking to live in another area of the city or in its suburbs where housing costs are lower. Excellent bus transportation is available in and around the Portland area.

Stipends

A monthly stipend of $100 is given each intern—regardless of marital status. Residents receive $125 a month the first year, $150 a month the second year and $175 a month during subsequent years of service. Residents also receive two weeks' vacation each year. Internship appointments become effective July 1; residency appointments are effective July 15.

The Pacific Northwest is regarded by many as the recreational capital of the United States with Portland as its center. Here may be enjoyed unlimited activities: beach-combing on the Oregon coast; salmon and trout fishing; skiing on the slopes of nearby Mt. Hood; sail boating on the Columbia River; and hunting either for deer or elk, or for upland birds and ducks. All are available only a few miles from the city. In addition, residents may enjoy all of the advantages offered by a large metropolitan area with a population exceeding three quarters of a million people: movies; stage shows; concerts; golf; and a host of others. Religious services of the resident's choice may be attended in any of Portland's downtown churches.

For additional information you may write to the chief of the service in which you are interested.

". . . and then we simply ran out of diseases . . ."

Renaissance in Otorhinolaryngology

Many physicians concluded the ENT man was on the way out when antibiotics made most mastoidectomies unnecessary. They couldn't have been more mistaken, claims the author. The demand for ENT specialists is at an all-time high—and the specialty itself has taken off in new directions, offering young physicians greater challenges than ever before

Daniel M. Seftel, M.D.

"What do you do in ENT these days?"

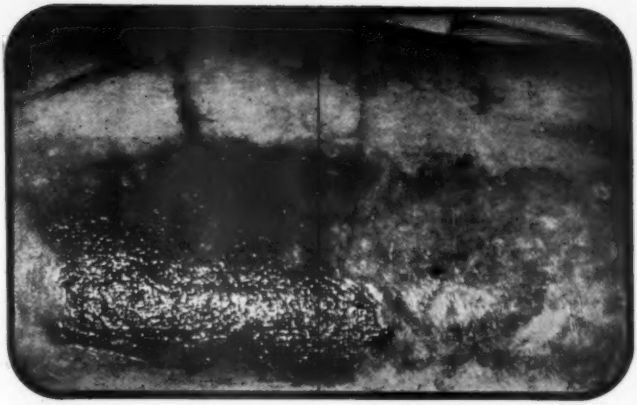
"I haven't seen a mastoidectomy in years."

"Nasal sprays, eardrops, throat lozenges and antibiotics—let's face it, you ENT boys have had your day."

These and similar statements, some considerably more uncomplimentary towards otorhinolaryngology, have been made to me ever since I decided to enter training in ENT.

As a result, I am sure that the great majority of otherwise alert physicians have concluded that ENT no longer offers that challenge nor requires the surgical skill of the pre-antibiotic era. This feeling carries over to the public as well; somehow, an ear, nose and throat doctor doesn't seem to have the social importance or impact of a "heart specialist," or a "brain surgeon."

Of course, writing off an entire specialty of medicine because of a revolutionary discovery in chemotherapy which has allowed the specialty to progress to other equally complex problems of prevention and cure, can hardly be considered positive or even logical thinking. It is as if all psychiatrists were suddenly



Skin graft donor site after 2 weeks' treatment with...

petrolatum gauze—still largely granulation tissue | FURACIN gauze—completely epithelialized

OBJECTIVE EVIDENCE OF SUPERIOR WOUND HEALING

was obtained in a quantitative study of 50 donor sites, each dressed half with FURACIN gauze, half with petrolatum gauze. Use of antibacterial FURACIN Soluble Dressing, with its water-soluble base, resulted in more rapid and complete epithelialization. No tissue maceration occurred in FURACIN-treated areas. There was no sensitization.

Jeffords, J. V., and Hagerty, R. F.: Ann. Surg. *145*:169, 1957

FURACIN®. . . brand of nitrofurazone
the broad-range bactericide that is *gentle to tissues*

spread FURACIN Soluble Dressing: FURACIN 0.2% in water-soluble ointment-like base of polyethylene glycols.

sprinkle FURACIN Soluble Powder: FURACIN 0.2% in powder base of water-soluble polyethylene glycols. Shaker-top vial.

spray FURACIN Solution: FURACIN 0.2% in liquid vehicle of polyethylene glycols 65%, wetting agent 0.3% and water.

EATON LABORATORIES, NORWICH, N.Y.

Nitrofurans—a NEW *class of antimicrobials—neither antibiotics nor sulfonamides*

to be considered obsolete because of the development of tranquilizers.

Yet, there is an area of this general deprecation which finds validity, not to the ENT specialty, but to the individual ENT specialist who has permitted his advancing specialty to outdistance his own practice. It is true, that some of the older ENT specialists, having seen the sudden decrease in the need for mastoidectomies, found their remaining inventory of surgical skills limited to removing tonsils and performing submucous resections. But there are also the old timers who became new timers, who successfully met the opportunities and challenge of their changing specialty practice, who had the interest, ability and understanding to learn new concepts and techniques and pass them on to the younger men entering the field. To these men, and to young physicians making their choice of specialty today, otorhinolaryngology is at least as interesting and exciting as any of the so-called "popular" specialties.

What does the ENT man do today and what lies in the immediate future for his specialty? The fact is, that ENT is in its renaissance and the demand for competent men in the field far exceeds the supply of well-trained specialists. Each part of the multi-syllabic, tongue-twisting specialty name, oto-rhino-laryngology, points to a unit of medical science, which though part of the whole, is at the same time an individual study and practice.

Otology

One of the most fascinating and complex units of the specialty, otology has evolved and adapted itself to an ever changing medical environment. Much of the progress in this field has been because of, not in spite of antibiotics.

Where previously the goal had been only to eradicate infection, the horizons of temporal bone surgery have been extended to maintain and even improve the hearing. Also—and in answer to those who haven't seen a mastoidectomy in years—I can assure you that the resident who takes his training in a hospital offering a busy, well-staffed ENT service will have performed many

About The Author

Born in the United States, the author is a graduate, Faculty of Medicine, University of Geneva, Geneva, Switzerland (1954). He took a rotating internship at Kings County Hospital, Brooklyn, New York (1955), and was assistant resident in otolaryngology at Columbia-Presbyterian Medical Center (1956). He is now senior resident in otolaryngology at Veterans Administration Hospital, Bronx, New York.

strengthen
fragile capillaries

in internal bleeding

associated with abnormal capillary permeability and fragility in

peptic ulcer

ulcerative colitis

chronic nosebleed

purpura (nonthrombocytopenic)

hemorrhagic cystitis

habitual and threatened abortion

menorrhagia

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indicated mastoidectomies in order to be competent in this procedure in his private practice.

Because of modern chemotherapy, we have been able to develop and perform elective procedures that one dared not do for fear of introducing or spreading infection. As a result, thousands of people throughout the world are hearing better without the use of hearing aids and other mechanical devices. You are all familiar with the fenestration operation. But even more recently an operation called stapes mobilization appears to hold a very promising future; this still requires further development and perfection of technique. In recent years various plastic procedures of the middle ear have been in the stage of development, both to improve hearing and reduce the incidence of the old "running ear."

Since World War II, audiology, a corollary of otology, has become most significant. Throughout the country, speech and hearing clinics have sprung up and are steadily increasing in number. Hundreds of ambitious young men and women including neurologists, pediatricians, psychiatrists, psychologists, speech and auditory therapists, usually directed by or under the supervision of an otologist, are actively engaged in rehabilitating children and adults. Many of these children who would have grown into deaf mutes will become self-sufficient, taking their place in a normal society.

Rhinology

In rhinology too, the ENT man must develop and utilize modern medicine. Rhinology refers not only to the nose per se, but the paranasal sinuses and the respiratory system. In treating the various allergies of the respiratory tract, the otolaryngologist must understand concepts of allergy, the physiology of the corticosteroids, their uses and contraindications; if he is interested in nasal reconstruction, new methods and instruments are currently in the literature.

Laryngology

Under laryngology I will take the liberty of including head and neck surgery and of course the various endoscopic procedures. The ENT man who wishes to be proficient in this type of work must understand the principles of cancer surgery, be able to perform procedures improved upon since World War II, thanks to antibiotics (again) and modern anesthesiology, such as the commando operation, radical maxillectomies, and other operations for primary neoplasms of the head and neck in continuity with neck dissections. Above all, the modern ENT surgeon must have an understandable knowledge of modern radiotherapy. He must be in a position to decide if surgery or radiotherapy is better for the patient—and in order to be qualified for this, some knowledge is necessary concerning the present day means our radio-

[redacted] *announces...*

a superior psychochemical
for the management of both
minor and major
emotional disturbances

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Dartal is a unique development of Searle Research, proved under everyday conditions of office practice

It is a single chemical substance, thoroughly tested and found particularly suited in the management of a wide range of conditions including psychotic, psychoneurotic and psychosomatic disturbances.

Dartal is useful whenever the physician wants to ameliorate psychic agitation, whether it is basic or secondary to a systemic condition.

In extensive clinical trial Dartal caused no dangerous toxic reactions. Drowsiness and dizziness were the principal side effects reported by non-psychotic patients, but in almost all instances these were mild and caused no problem.

Specifically, the usefulness of Dartal has been established in psychoneuroses with emotional hyperactivity, in diseases with strong psychic overtones such as ulcerative colitis, peptic ulcer and in certain frank and senile psychoses.

Usual Dosage • In psychoneuroses with anxiety and tension states *one 5 mg. tablet t.i.d.*

• In psychotic conditions *one 10 mg. tablet t.i.d.*

therapy colleagues have available. The betatron, million volt machine, cobalt bomb, radon, radium, radioactive gold, etc., all are tools of radiology with which the ENT man must be familiar.

Plastic reconstruction is another must. Techniques are currently being evaluated for functional as well as cosmetic reconstruction of the mandible, the esophagus and the larynx.

And for the otolaryngologist who wants to maintain the respect of his fellow internists as an endoscopist, a thorough knowledge of diseases of the esophagus, the bronchopulmonary system and their corresponding roentenographs is mandatory.

Residency

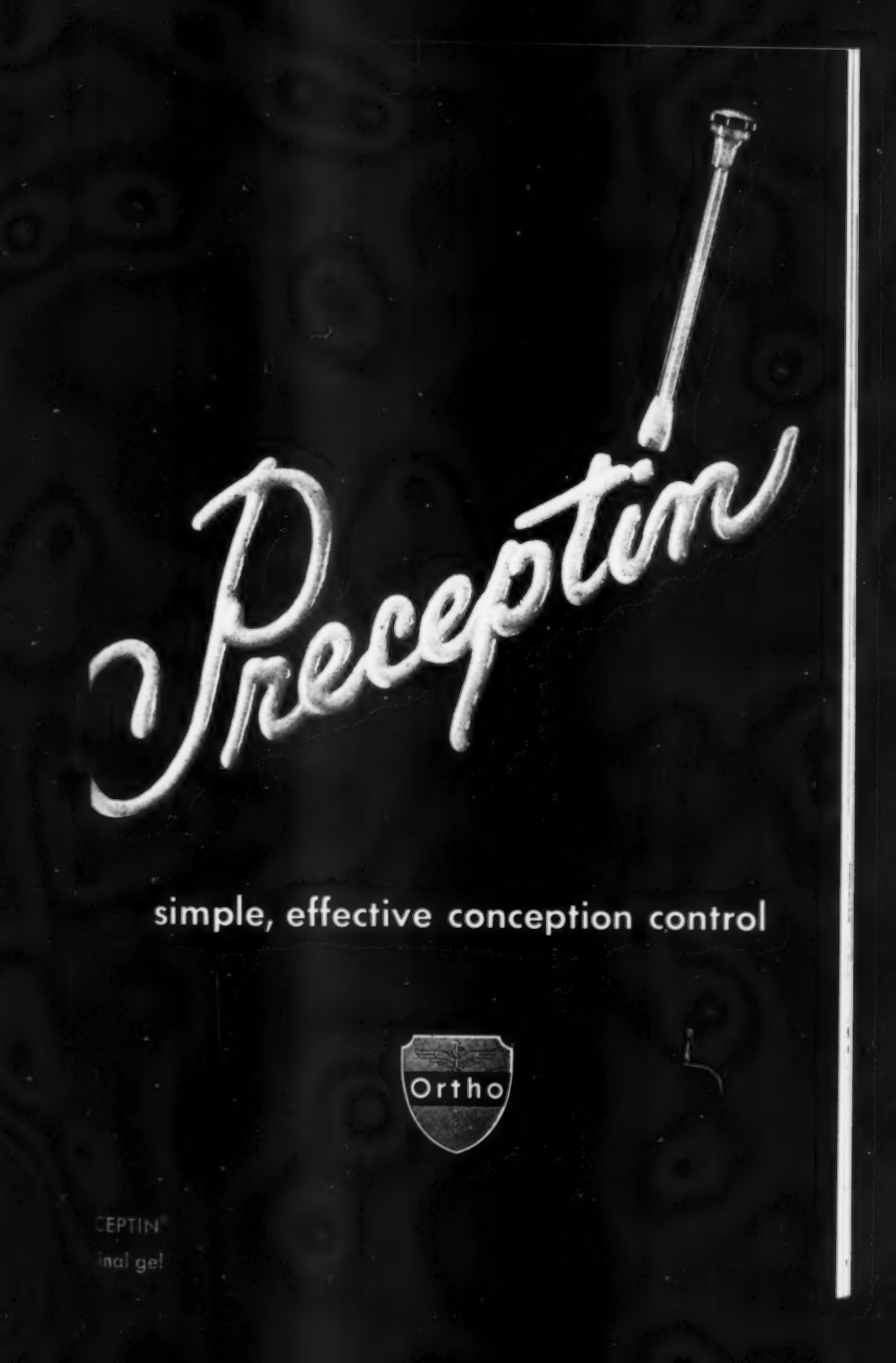
In order to be proficient in laryngology, training in the principles and surgery of head and neck tumor work is essential. Head and neck tumors comprise about 18 percent of all malignant tumors of the body. Here the young physicians may find some difficulty in finding a residency that offers good training in the various facets of head and neck. He will find that in many centers there are discrepancies as to what services get what lesions. In many places he will find that most of this work is done by general surgeons, or a specialized head and neck service, or even the plastic surgical service. Therefore, I would advise the resident to make a careful perusal of the operating schedules of the various ENT residencies he is thinki about.

Most of the major head and ne work requires surgical experien and to the ENT resident who wish to do much of this type of practi I would recommend a year of g eral surgery residency. (This w count towards your ENT residen requirements.)

In conclusion, among the things look for in an ENT training p gram are:

- at least one year of formal ba science instruction,
- instruction, training, and expe ence in the field of audiology,
- an attending staff interested teaching,
- an adequate number and va ety of service patients throu which you may acquire experien in medical management of the va ous ENT problems and surgi skill in sinus surgery, head and ne surgery, temporal bone surger nasal and otoplastic surgery and e doscopy. The resident-to-be shou take the time to look about; see a compare the ENT residency p grams you intend to apply for.

Obviously, in this article, I ca not attempt to encompass everythi that is being done in the field otolaryngology. To those who a under the misconception that EN is a stagnant or even dying speci ty, I have tried to indicate rece advances being made, and to poi to the dynamic present future ENT.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Although I mention this at the end, I feel it deserves mention: well-trained ENT specialists can support themselves; actually, most surveys of professional incomes place them near the top of the list.

To those young men who are thinking about ENT as a specialty, I hope this will aid them in their analysis—as well as give them a few pointers on choosing a residency hospital that will offer them all the aspects of modern otorhinolaryngology.

NEXT MONTH—another ENT man looks at his specialty in "Otorhinolaryngology: Residency and Private Practice."

"Come now, your blood's not *that* tired!"

When tension, anxiety accompany a clinical picture of overweight

DEXAMYL* will help in two ways. 'Dexamyl' (1) curbs appetite, and (2) provides both mood improvement and relief from tension and anxiety. A combination of Dexedrine* (dextro-amphetamine sulfate, S.K.F.) and amobarbital, 'Dexamyl' is available as tablets, elixir and Spansule* sustained release capsules.

Smith Kline & French Laboratories, Philadelphia

Language Problems of Fo

English language difficulties of foreign residents and interns in U. S. hospitals can be corrected. Now available to hospital educators are accurate screening methods to reveal serious language handicaps, and teaching techniques which can provide the foreign physician with the high degree of English comprehension necessary to his graduate training in this country. The authors point out that a few months of careful and intensive English training in the U.S. are worth years of haphazard instruction abroad—or worse, in American hospital situations.

More than 3,000 physicians come to the U. S. annually for postgraduate training in American medicine. Large numbers of them are sponsored by U. S. governmental and philanthropic organizations. Many foreign countries, who expect us to share our advanced knowledge and techniques and to contribute to improved world health, are spending large sums to send their doctors here.

Actually, the need is mutual; foreign physicians help fill a manpower shortage on our hospital staffs: in 1956, more than 38,000 approved internship and residency positions were available in American hospitals with only about 24,000 American physicians to fill the openings.

Yet, despite the pressures for accepting foreign applicants, internship and residency directors must take every precaution to select only those who are properly prepared to begin the rigorous program of training. Foreign medical school grad-

# of Foreign Physicians

William R. Slager, Ph.D.

Carter M. Ballinger, M.D.

From the Department of English and Division of Anesthesiology
University of Utah

uates, who constitute 26 percent of the house staffs of approved U. S. hospitals, have an important influence on standards of medical education and care.[1]

Competence

Medical background is not the only important consideration in selecting the foreign physician for residency or internship. We must remember that he is meeting for the first time a new kind of instruction, much of which is accomplished through conversations and verbal explanations as well as through lectures. Thus he should have a high degree of competence in spoken English before he begins his graduate training in a hospital. Otherwise, he often becomes discouraged and even morose. Unable to understand directions, however carefully and patiently given, he profits little from his educational experience here. And he may carry home with him nothing more than a picture of Niagara Falls and a few unpleasant memories.

1. In 1953, there were more than 33,000 foreign students in the U.S., in some 1,300 institutions. This represents an increase of 300 percent over 1930. During the same period the enrollment of American students increased only 100 percent. See Du Bois, Cora: Foreign Students and Higher Education in the United States. Washington, D.C.: American Council on Education, 1956. See also: Graduate Medical Education in the United States, J.A.M.A. 162: 277-411 (Sept. 22) 1956.

Evaluation

The great need for evaluating foreign medical school graduates and setting up desirable educational requirements for their admission to American hospitals has recently been recognized in the creation of the Educational Council for Evaluation of Foreign Medical School Graduates.[2]

When the program is in operation, it is planned that each potential candidate be investigated to determine that:

- he is a graduate of a *bona fide* medical school;
- he has reached a level of educational attainment comparable to that of students in American schools as nearly as can be measured, at the time of graduation;
- he has sufficient facility with English to undertake graduate training.

Should this program be generally accepted, it will do much to help raise the standards of medical care and the educational standards of the American hospitals involved. At the same time it should greatly increase the value of the training received here by the foreign physician.

But until this program is fully worked out, residency directors themselves, if they know about and make use of the tests and materials now available in the field of English as a foreign language, can do a better job of screening foreign appli-

About the Authors

DR. BALLINGER

AFTER RECEIVING his M.D. degree in 1945 at the University of Iowa, Dr. Ballinger took a one-year rotating internship at Fresno County General Hospital in Fresno, California, served two years in the Army Medical Corps (assigned to a VA hospital), and then spent two years in surgery at Crile VA Hospital in Cleveland, Ohio. Then followed a course in anesthesiology at the Graduate School of the University of Pennsylvania and a two-year residency in anesthesiology at Presbyterian Medical Center. He remained there until 1954 when he accepted his present post of Assistant Professor and Director, Division of Anesthesiology, University of Utah, College of Medicine.

ants with language problems for house staff positions.

Proficiency

When they receive application papers from foreign physicians, most graduate medical educators are at a loss to evaluate facility in English. The problem is not limited to medical schools. Indeed, graduate schools of all kinds throughout the country have for a long time recognized how unreliable most statements of English proficiency that accompany application forms can be.[3] They are based on statements from teachers, on informal conversations with the students by consular officials, or on subjective tests requiring individual administration and subjective judgment.

Unfortunately, the students themselves often do not realize the seriousness of their language handicap. Since many of them have read textbooks in English, they assume that they can converse readily in English.

2. The Council has been established by the Federation of State Medical Boards of the U.S., the Council on Medical Education and Hospitals of the AMA, the Association of American Medical Colleges, and the American Hospital Association.

3. See the Journal of Proceedings and Addresses of the Fifty-fourth Annual Conference of the Association of American Universities and Fifth Annual Conference of the Association of Graduate Schools. October 12, 1953, mimeographed. (Quoted in part in Cora Du Bois, op. cit.)

DR. SLAGER

THE TEACHING of English to foreigners is Dr. Slager's major concern. After he received the Ph.D. in English from the University of Utah in 1951, he taught there as an instructor for one year. He was awarded a Fulbright Scholarship to Egypt where he lectured at the Faculty of Arts, Cairo University, and at the Institute of Education, Heliopolis University. He is Assistant Professor of English at the University of Utah, in charge of English and speech work for the foreign student; and he is also a member of the summer staff of the English Language Institute, University of Michigan. He has published in *Language Learning* on problems related to teaching English to foreigners.

Consequently, they may enter American hospitals with almost no knowledge of the spoken language. Then the troubles begin. They cannot readily communicate with patients. Medical and nursing staffs become impatient and lose confidence in them.

Usually at this stage they are called into the director's office and advised to improve their English. But as new residents and interns, they are too busy with hospital duties to work seriously at learning English; and, even if they do not resent the extra demand on their time, they are uncertain about what help to get and where. Confusion reigns.

Modern techniques

Fortunately this situation need not exist today. There are presently available highly accurate objective screening methods and improved teaching techniques which can be used for foreign students.

It would be valuable for American medical educators—and for educators and physicians from non-English speaking countries as well—to know more about these devēlopments. There should be more widespread understanding of their usefulness. The tests described here can be used to evaluate proficiency in English of physicians 1) who are still abroad, 2) who are already in the United States but not yet in graduate training, and 3) who are already in graduate training but because of their slow progress suggest a serious language handicap.

Correctly applied, these tests can indicate those physicians ready for graduate training and those who must first concentrate full-time on learning English.

Tests

In addition to the examinations listed here, many others have been prepared at universities and colleges throughout the country.[4] Some, like that prepared by Professor Archibald Hill for Georgetown University, are linguistically sound and can be relied upon. Unfortunately, these tests are not available for general use.

If the foreign physician is already in the U. S., chiefs of internship and residency programs might well send him to testing facilities available in their own area. Most university campuses have a foreign student adviser who will direct inquiries. English and speech work for foreign students

4. For a definitive bibliography (with some description and criticism) see Lado, Robert. Annotated Bibliography for Teachers of English as a Foreign Language. Washington: Department of Health, Education and Welfare, 1955. See also Lado, Measurement in English as a Foreign Language. Ann Arbor: University Microfilms, 1950. Of course the list of materials must be brought up to date. One valuable contribution is New Materials and Aids in the Teaching of English as a Foreign Language. National Association of Foreign Student Advisers, English Language Section Committee, 1955-56. This valuable bulletin lists works in progress as well.

Case-Report Abstract: *H.R., male, aged 40*

Severe anxiety complicating acute posterior myocardial infarction, with sinus tachycardia and premature ventricular contractions. Prompt improvement followed the use of EQUANIL to calm the patient. The heart rate slowed, the premature contractions subsided, and the patient responded to reassurance. Medication with EQUANIL continues, and the patient has returned to work.[1]

"Cardiac patients who show significant manifestations of anxiety should receive ataractic treatment as part of the therapeutic approach. . . ."[1]

1. Waldman, S., and Pelner, L.: Am. Pract. & Digest Treat. *8*:1075 (July) 1957.

heart disease is a state of stress

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Meprobamate
PHENERGAN® HCl
Promethazine HCl
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A Wyeth normotropic drug for nearly every patient under stress

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Relieves tension—mental and muscular

might be found in the English speech or modern language departments. If the foreign student enrollment is large, usually some organized program will be underway.

However, it must be remembered that as an area of specialization, English as a foreign language is relatively new, and some campuses do not yet have linguistically sound tests and teaching methods.

If the candidate is still abroad, he should be advised to report to the United States Information Service Office, or the cultural attaché of the consulate or embassy, regarding the nearest testing service.

A. Test of Aural Comprehension.[5] *English Language Institute, University of Michigan. Examination material, test booklets, 10 cents each. Answer sheets, 2 cents each.*

What it tests: The student's ability to understand spoken English (which inevitably involves recognition of vocabulary and structural signals). The student listens to a series of sentences, which are spoken in natural, colloquial style. For the first half of the test, the student chooses answers among pictures which illustrate the meaning. For the other half, the student

5. See Lado, Robert. "Phonemics and Pronunciation Tests," Modern Language Journal 35: 531-542 (November), 1951. See also Lado, Robert. "The Relation of Entrance Level to Rate of Progress in Aural Comprehension," Language Learning 2: 105-112, 1949.

chooses among multiple written answers. In many ways, the student's ability in aural comprehension is the most important single fact for the doctor to know: for it indicates exactly how well the student will be able to follow lectures and oral directions.

How it is administered: A native speaker of English must read the questions aloud. (Presumably it would be possible to put the questions on tape, but it would be necessary to check before playing the tape to see that the directions are clear.) The student enters the answers on a sheet which can be scored mechanically. The test requires about 30 minutes.

How to interpret the scores: The score is given in percentages. If, for example, the student receives a score of 50, he might be expected to miss roughly about half of the words that were spoken to him. Since that 50 percent might include key words, it is quite likely that the student might miss the import of complete lectures and might often find simple commands incomprehensible. Any score less than 80 percent could be seriously questioned. Our experience at Utah has shown this test is the most useful, and dependable, of all.

B. English Language Test for Foreign Students *By Robert Lado. Ann Arbor: Wahr Publishing Company. Test booklets, 25 cents each. Answer sheets, 3 cents each.*

What it tests: The test has three parts: Part I covers recognition of structural signals and sentence patterns; Part II is a paper-and-pencil pronunciation test; and Part III covers vocabulary.

How it is administered: A great advantage of the test is the simplicity of the mechanics of giving and scoring. It is completely objective; it may be given by untrained personnel; and it is quickly scored with a key. It usually requires from one hour to one hour and a half.

How to interpret the score: The score is given in percentages. The *total score* may be used for gross distinctions. (In experiments at Utah, native speakers have frequently failed Part II, Pronunciation.) Experience at Utah has

proved, for example, that those students who score above 80 percent invariably do well in the regular freshmen English course. Those who score below 80 invariably have trouble. Scores below 70 percent indicate that that student will have major language difficulties.

C. DIAGNOSTIC TEST FOR STUDENTS OF ENGLISH AS A FOREIGN LANGUAGE *Developed by A. L. Davis of American University. Published and distributed by Educational Services, Washington, D. C. Set of 10 Test Booklets, $3.50. Set of 10 self-scoring answer sheets, $1.00.*

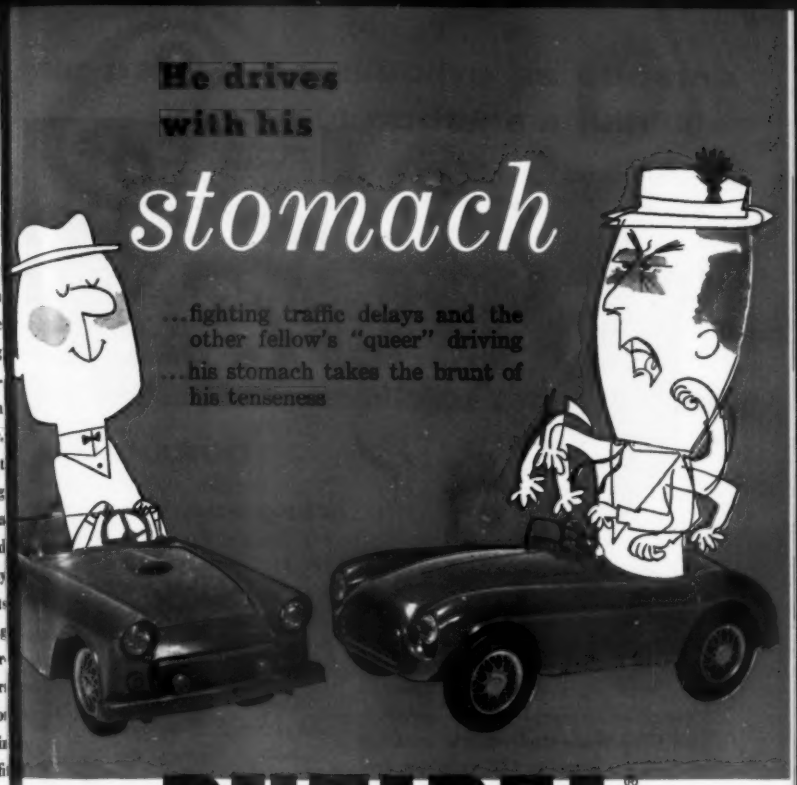
What it tests: Designed to test structure and vocabulary. There are 150 multiple-choice questions. The "general grammar" sections include word order and modals. The emphasis is on idiomatic vocabulary.

How it is administered: The test can be easily administered by untrained personnel. It is completely objective, and can be scored quickly. The answer sheet has a carbon, and the answers are printed on the undersheet. The student is allowed an hour, but usually finishes in less time.

How to interpret the score: Information issued with the test asserts that "students who score over 125 are satisfactorily prepared for college work." The test has been used extensively at the American Language Center of American University in Washington; also, it is given

Screen and teach

The idea for the presen article was born after Dr. Ball inger referred an anesthesiology resident to Dr. Slager for English training. Dr. Ballinger became interested in the kind of testing and teaching that the resident received. After further association and discussion, both he and Dr. Slager became convinced that physicians involved in training programs would appreciate a nontechnical survey of tests and materials recently developed by linguists for screening applicants from abroad and for providing remedial teaching after their arrival in the U. S. The author feel that both the foreign doctor and the hospital or university in which he trains would benefit from stricter screening: the doctor because he has faced his language problem realistically and has not tried to begin his medical training while seriously handicapped by his English; the hospital because it can concentrate on its proper business of medical care and training without the added problems of misunderstood lectures and directions.


He drives
with his
stomach
...fighting traffic delays and the other fellow's "queer" driving
...his stomach takes the brunt of his tenseness

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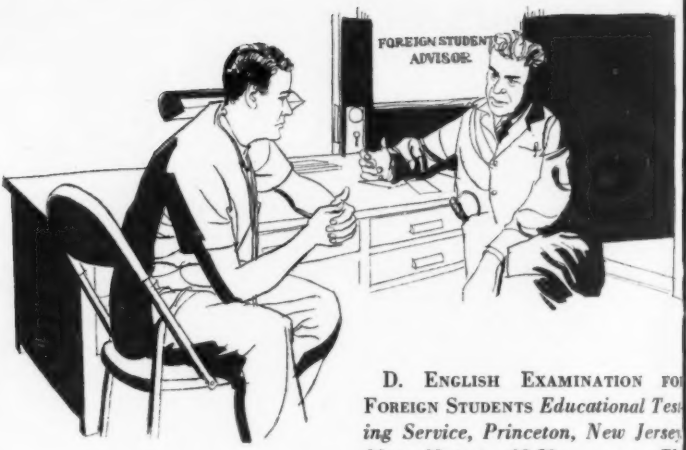

to all applicants for International Cooperation Administration fellowships from countries engaged in health activities with U. S. assistance. At Utah, some students who received as high a mark as 132 were not prepared for freshman composition; on the other hand, students with scores as low as 117 have done satisfactory work in freshman composition. The test has value in making gross distinctions—those students above 130 may have considerable reading fluency; those below 115 might be seriously questioned. Its most serious limitation is that it does not distinguish those students who need oral-aural training—which is the information hospitals and medical schools screening candidates may be most interested in finding out.

D. ENGLISH EXAMINATION FOR FOREIGN STUDENTS *Educational Testing Service, Princeton, New Jersey. 10 to 19 tests, $3.50 per copy. The price includes the test booklets and answer sheets, scoring keys and conversion tables. Sets of phonograph records are also available.*

What it tests: The examination is comprehensive. Its two major areas are silent reading and aural comprehension. Silent reading includes vocabulary, grammatical forms, and comprehension of sentences and paragraphs. Aural comprehension is measured by questions which are played on records. Pronunciation is tested by rhymes and accentuation. An essay is required. And finally, there is a non-verbal test which "is designed to assist in predicting quality of work in courses of a quantitative nature." There is also a special section on scientific vocabulary.

How it is administered: Trained personnel are not required to admin-

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ister the test. For the most part, it is scored objectively. However, the essay would require a reader with considerable experience. Even though the personnel administering the test would not need special training, the test would require considerable staff time because of its length and complexity.

How to interpret the score: A percentile rank table is provided by E.T.S. It was based on 507 scores. So it is possible to compare performance with these norms. They were established some time ago, however; no additional normative studies have appeared since then, and their general usefulness is questionable. Most of the tests are well worked out. The weakest, (as Lado has pointed out) is the section on aural comprehension. It places a heavy strain on memory; it does not cover the sound patterns systematically, and it does not include conversational materials. The section on non-verbal reasoning attempts to fill a real need in testing of this sort: the need to determine ability without unnecessary handicaps imposed by the foreign language. However, our education psychology department at Utah is not convinced that these tests reveal anything about ability or future college success, either in the humanities or in the sciences. To be valid, the test must not only be non-verbal, but also culture-free.

E. AN ENGLISH READING TEST FOR STUDENTS OF ENGLISH AS A FOREIGN LANGUAGE. *By Harold V. King and Russell N. Campbell. Washington Publications, Washington, D. C. Test booklets, 15 cents each (quantity price 10 cents each). Answer key 3 cents.*

What it tests: This test makes no extravagant claims. It is announced as a test of reading ability only. Of course, vocabulary and, to some extent, recognition of grammatical patterns are inevitably involved.

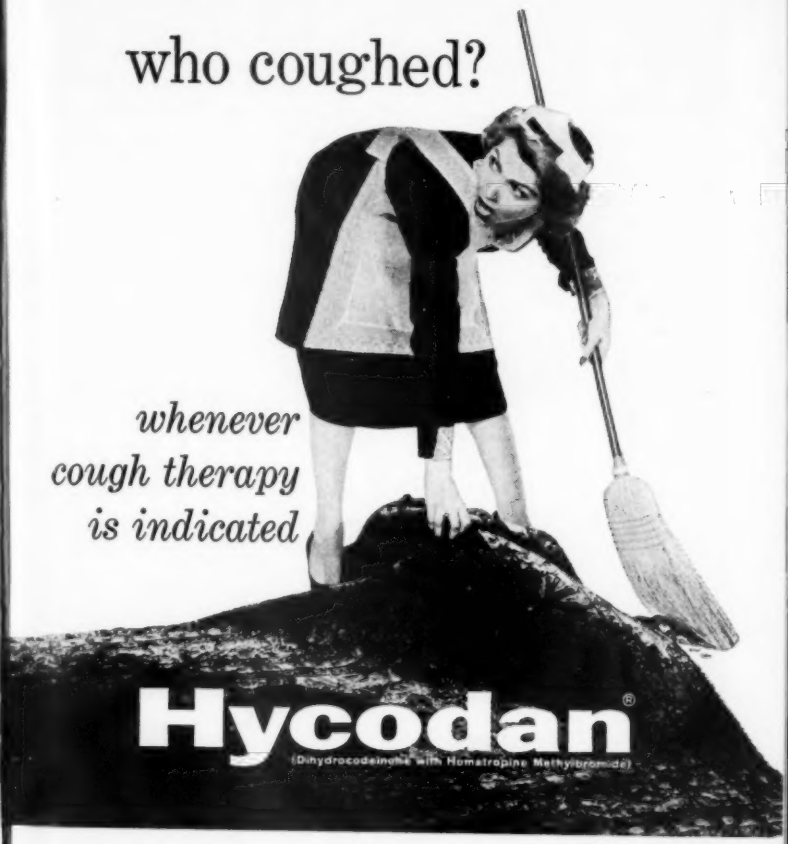
How it is administered: The student reads a series of sentences and paragraphs about which he answers questions of the multiple-choice variety. The test is easily administered, and requires only thirty minutes. It can be graded objectively.

How to interpret the score: The somewhat pretentious interpretation of scores which comes with the test does not state the number of cases on which the norms and predictions are based. It would seem, however, in the absence of more precise tools, to offer a kind of gross measurement: students above 90 would be able to read English fluently; all scores below 70 could be seriously questioned.

F. EXAMINATION FOR THE CERTIFICATE OF PROFICIENCY IN ENGLISH *By Robert Lado, English Language Institute, University of Michigan.*

What it tests: The student's control of spoken English, through paper-and-pencil techniques only.

who coughed?



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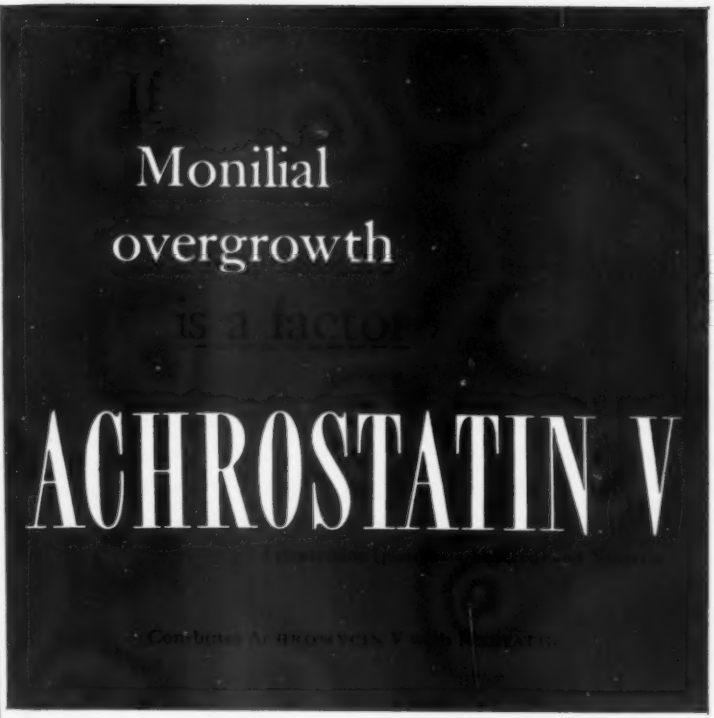
The test has sections on pronunciation, grammatical structure as used in conversation, recognition and production vocabulary, and contextual reading. The section on pronunciation includes sentence stress and intonation. The section on grammar includes comprehension of patterns, completion of conversations and partial production. The section on vocabulary asks for partial recall in sentence context. There is also a section on contextual reading and information.

How it is administered: The test is administered through U. S. I. A. Offices throughout the world. The test booklet is sent by those offices to the University of Michigan for scoring. If the score is satisfactory, a Certificate of Proficiency in English is issued by the University of Michigan.

How to interpret the score: The student does not receive an exact score, but, if he receives a satisfactory mark, he is issued a Certificate of Proficiency. Since the test is taken by students with a wide range of ability—from highly accomplished teachers of English abroad to beginning persons planning to take university courses in the U. S.—the passing score is sufficiently high to guarantee real achievement in the language. A candidate with this certificate could be accepted with confidence.

In part II of this article (next month) we will describe some of the English training opportunities available here and abroad which approach scientifically the language needs of the individual student—English teaching techniques based on a careful comparison of the



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sound system and structural system of the native language and the target language (English).

In these intensive programs, the special concerns of, for example, Thai-English or Persian-English or Spanish-English, can be systematically defined and taught. A few months of careful and intensive English training here are worth years of haphazard, trial-and-error effort abroad—or worse, in American hospital situations.

Finally, this paper makes a brief survey of texts, records and other aids to learning English for foreign physicians who need help but who do not have access to one of the intensive courses. The survey is necessarily brief; for, while hundreds of books are available with which the student might achieve indifferent success, there are only a handful of scientifically sound studies which would be of genuine help. The records available are even fewer, although the lack is being remedied rapidly.

". . . and I was just explaining to her what 'TLC' meant . . ."

The House Staff Role in Undergraduate Medical Education

The resident and intern staff can help the medical student arrange his work and study. But it works both ways; student can assist house staff, too.

Chester S. Keefer, M.D.

Our teaching hospitals which provide the opportunities for undergraduate students of medicine are institutions of learning as well as institutions rendering community medical services. They are colleges which provide the educational facilities for the training of a wide variety of people who are interested in the prevention of illness, the care of the sick and the promotion of health. Teaching hospitals are institutions where the theoretical and practical rivers of medical science join and form a broad and deep sea; they are the places where the medical student may encounter and learn of life in all of its manifestations.

Organize

The teaching hospital which admits undergraduate medical students is a community health and educational institution and the students are considered to be members of the total group responsible for the professional care of patients as well as advancing knowledge while they learn. This center of learning and science presents the student with opportunities for self-education and self-development under expert guid-

ance and supervision. Here, the student learns by actual experience and by developing his powers of observation and reasoning. Here he learns how to organize his thoughts and test them against those which have been recorded by others. Here he learns how to adjust the diverse elements of his previous education so that the integrated result may exhibit the predetermined quality of medical care.

In the hospital environment, he learns first hand that the doctor does not stand alone in the care of the patient but that the entire staff of doctors, nurses, specialized therapists, social workers, technicians, sometimes referred to in the current jargon as the "health team," contributes to the welfare of the patient.

In short, our teaching hospitals for undergraduates are highly organized colleges and educational institutions, dedicated to the improvement of medical care throughout its entire range. The professional staff is devoted to improving patient care through extending education as it is intimately related to research.

Supervisors

The quality of the educational program and the opportunities for undergraduate students to learn in our teaching hospitals are no better than the quality of the personnel who are charged with the responsibility of professional care. The staff organization is important in defining responsibilities and for the assignment of duties. The house staff is one of the most important operating groups. Its members have graded responsibility and various duties for which they are accountable. One of the important functions of the house staff is to join with all other members of the group in the educational process of the undergraduate medical student.

In general, the house staff is in immediate supervisory capacity of the undergraduate student. The students and the house staff work with one another as a closely integrated unit. They have ample opportunity to exchange information and learn from one another how to think, how to organize their work, how to observe and record, how to reason and how to develop an understanding of the problems of medical diagnosis and treatment.

The personal and professional relations between undergraduate students and house staff are usually upon a much more informal basis than the relations between the student and the senior members of the faculty. This is one of the reasons the house staff plays such an important role in undergraduate education.

In short, then, the house staff of a well organized teaching service plays a positive role in the education of the undergraduate—and the undergraduate plays an important part in the education of the house staff. They learn from one another.

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streptococcal invaders

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Necessary qualities

For the members of the house staff to become most effective as teachers, they must teach. They do this by example, by communication and by sharing information with the students. They gather information about patients together. For house staff and students to do their best work, they must have time for routine work, time for leisure, time for reading and study, and time for reflection and thinking in connection with their patients, their responsibilities and their duties. They must create an environment in which they can enjoy their work. Rigid and inflexible programs of dull and routine work with indiscriminate discipline defeats its own purpose by dulling the mind and the imagination.

The house staff, working in close cooperation with the student, can help the student organize his work and his study and assist him in the organization of his thoughts. They help the student see the whole man by bringing together many separate disciplines. The educational system of the house staff and the students develops the qualities so necessary at a later stage of a medical career.

The essential point is that the members of the house staff as well as the student body should acquire intellectual and technical excellence in such a way as to prevent damage to those energies of the mind which will direct the technical and intellectual skills the rest of their lives.

It should be recognized by the members of the house staff that the undergraduate students are their most severe critics. The student soon learns to assess the house officer; that is, the qualities of his mind, his factual knowledge, his general technical skill and his personality. Conversely, the house officer is in a strong position to assess the potentialities of the student and to help him develop and to assist in his conversion from a student to an M.D.

Thus, it is most important for members of the house staff in our teaching hospitals to accept their important role in the education of the undergraduate student. Together the student, intern and resident combine to form a working and learning unit — working with and learning from one another.

The house staff should keep in mind the fact that the students of today are the house officers of tomorrow; the pupils soon become the teachers.

About The Author

Dr. Keefer is Vice President in charge of medical affairs and Wade Professor of Medicine, Boston University School of Medicine, Physician in Chief, Massachusetts Memorial Hospital, Boston, Mass.

SECOND OF A SERIES

Medical Ethics and Etiquette

SECTION I. "The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion."*

In this day and age, when materialism is rampant and idealism appears to be on the wane, and in which the ten-thousand-dollar automobile, the hundred-dollar hat, and the fifty-dollar tie actually have takers enough to make their production profitable, the fact that as physicians our first responsibility in life is "to render service to humanity with full respect for the dignity of man" is, unfortunately, at times overlooked.

Too often in recent years, the young man entering the profession seems to be motivated by a desire to elevate himself socially and economically in one short hop, with the possession of an expensive or fancy car apparently being his immediate objective in life. Hedonism seems to rule supreme. One only has to look around the parking lot of a large hospital to feel the impact of the "must-have-a-car-at-any-price" urge.

This attitude is undoubtedly influenced by knowledge of the fact that in the last twenty-odd years the ability of the American people to purchase and pay for medical service has increased enormously. Doctors' charges have increased about eighty percent and hospital costs have nearly quadrupled in this time. (This is less than the cost of living has risen.) In the same period, due to the increase in fees received and in patients seen, doctors' net average earnings have increased about five times. This prosperity is visible for all to behold (often to the T-men), and at times seems to obscure the objective of our profession, which we "profess" to be "service to humanity."

Physicians must not forget that

*Principles of Medical Ethics. J.A.M.A. 164:1484 (July 27), 1957.

PREAMBLE

"These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws, but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public."

to merit the confidence of their patients, their character and behavior must be above reproach. Modesty in professional and financial activities must be their byword. All have taken the Hippocratic Oath, under which each has assumed the obligation to conduct himself in accord with its ideals. This obligation should weigh heavily on each physician. In this respect we must remember that our services should be sought by patients and that we do not compete professionally against each other. Hence, in all of our social contacts with other physicians' patients, scrupulous attention must be given to the point that it is a bad business to disparage a colleague's professional ability or character in any manner. The same holds true when we are called in an emergency to treat a colleague's patient.

It is to be noted that this "service" is to be rendered "with full respect for the dignity of man." This is an important concept, because a patient must always be considered as an individual, and not as a *case among cases*. Regardless of the problems which he may create, the trouble which he may stir up, the annoyances which he generates in you, your patient is an individual, a human being, and must always receive the respect that this status entitles him to; and never forget, no other philosophy should be tolerated in a physician.

In order to generate and maintain the best in patient-physician relationships, the free choice of the physician by the patient is a necessity. Otherwise, that unwritten but often long-lasting and ever binding contract which is tacitly entered into when a patient seeks and receives medical advice, has little force. Of course it must be understood that the physician can refuse to accept an individual as a patient, and that either the physician or patient can terminate the patient-physician relationship after due notice has been given (especially by the physician).

Another factor which must be considered in comment on Section I is that special consideration should be given in our thinking to problems which confront our profession and are covered in the phrase "rendering to each a full measure of service and devotion." Now, just what does this mean, and what should it mean to you? Your editor takes this phrase to mean that his patient is

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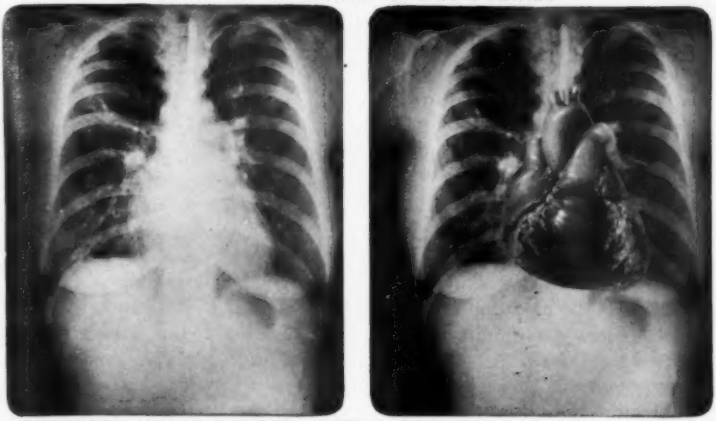

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*EHRLICH, J.C.: ARIZONA MED. 12:239 (JUNE) 1955.

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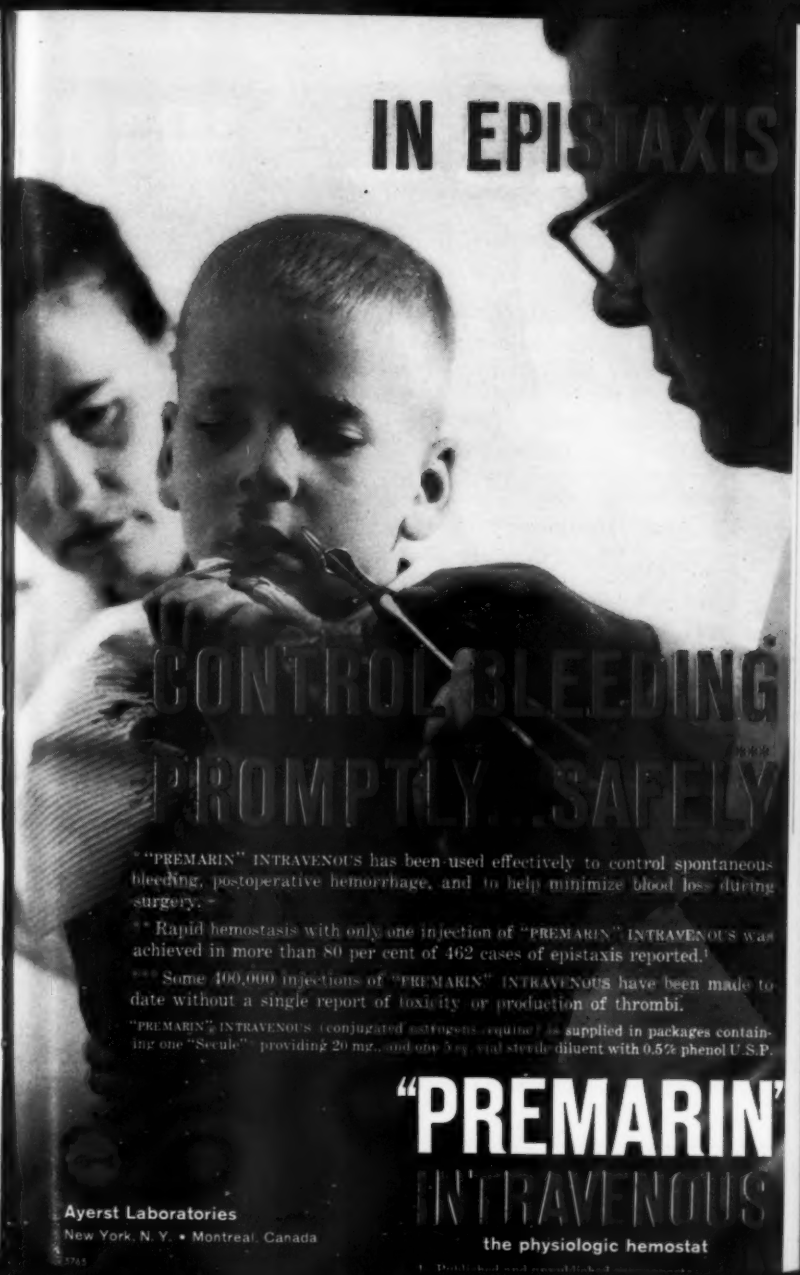
his patient, and that there will be no limit to time or effort spent for the welfare of this individual, as such is required. If he has to travel miles in the middle of the night, that's it. The patient has placed himself in the physician's care. Nothing will be done to disturb the patient's confidence or to give him the idea for an instant that he is not the most interesting and important individual in his physician's life. He will never be a "case" or under any conditions, a "crock."

Now, there will be some who will say that this idea is platitudinous, sentimental, biased, impractical, or in light of current thinking, anti-social, because it makes the doctor a slave of his patient. Such thinking disturbs me, particularly so because more and more your editor feels that the profession, especially among some of its younger members, is coming to regard taking care of patients as a forty-hour-week proposition with a "Medical Officer of the Day" or "On Duty Doctors" taking care of them during nights and weekends.

Then suppose, as certain dreamy individuals are urging, we do have a thirty-two-hour, or thirty-hour work week forced upon us? It will be doubtful in certain places in this country if patients will know exactly who their doctor is. I am not being facetious about this matter; since World War II the trend in a number of areas has been to gear the care of patients to a forty-hour-a-week schedule. Auxiliary services in many hospitals barely function from 5 PM on Friday to 9 AM on Monday and medical coverage is often minimal. This trend has interfered with patient care, and unquestionably has increased hospital costs by reducing the turnover of patients while at the same time decreasing the efficiency of hospital operations.

In certain of these areas it is not believed that doctors can be blamed for accepting the forty-hour week, because there isn't anything much they can do about it. I am referring to physicians in those governmental hospitals in which at night, and from Friday at 5 PM to Monday at 9 AM, professional and auxiliary staffing arrangements are at such a low level that at times it is even difficult to get emergency technical work done. This state of affairs seems to be becoming more common in voluntary hospitals, too. These situations are the result of political and economic factors. As an old curmudgeon, I will say that, in my opinion, these factors prostitute intellectual honesty and disparage hard work.

Maintaining hospitals on a full-seven-day work week might further sharply increase hospital costs, according to some directors. This would create a situation for which boards of trustees of some voluntary hospitals, who consider running a hospital a quasi-business enterprise, cannot find justification, and directors of bureaus of budgets won't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contemplate (except when directed to in election years) because they feel hospital costs are out of hand and that the monies under their control can be spent more "profitably" elsewhere.

However, we must remember that regardless of what holds relative to the auxiliary services in a hospital, the *devoted physician can see his patient in the hospital daily*, if such is desirable, even though the hospital is barely functioning nights and weekends. After all, much can be said for the utilization of clinical judgment. Your presence will always benefit your patient (and with the "labs" closed, probably save him and the hospital money which neither can afford). So, render "to each (patient) a full measure of service and devotion."

In this respect it must be remembered that as a general rule, it is considered unwise for a physician to treat members of his immediate family or himself. Obviously, the reason for this injunction is that his professional judgment has a chance of being impaired by his anxiety and worry over the illness of his loved ones. In these circumstances the physician should, gladly and without thought of being paid, give his professional services to physicians and their dependents, if they are in his vicinity. I myself was raised in a family of physicians in which this courtesy has also been extended to members of the clergy and the nursing profession, while dentists and pharmacists and their families were charged half the going rate. A young physician entering practice in a community should find out what the local customs are in respect to the extension of professional courtesy.

If a physician is called from a distance to consult and advise on the illness of a physician or his family, and the latter is in easy circumstances financially, a compensation which will at least pay for the traveling expenses of the consulting physician should be offered. If the consultant's visit entails a real loss of time from his practice, with a resulting pecuniary loss, thought should be given to including a fee in the compensation proffered. Also, if the physician or his family is covered by medical insurance which provides for the payment of fees, the physician's family physician should always be reimbursed for professional services which he has rendered, at standard rates.

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Surgery and the Law

By neglect, offbeat methods or acts resulting in damage to his patient, the surgeon may expose himself to liability, either criminal or civil.

George A. Friedman, M.D., LL.M.

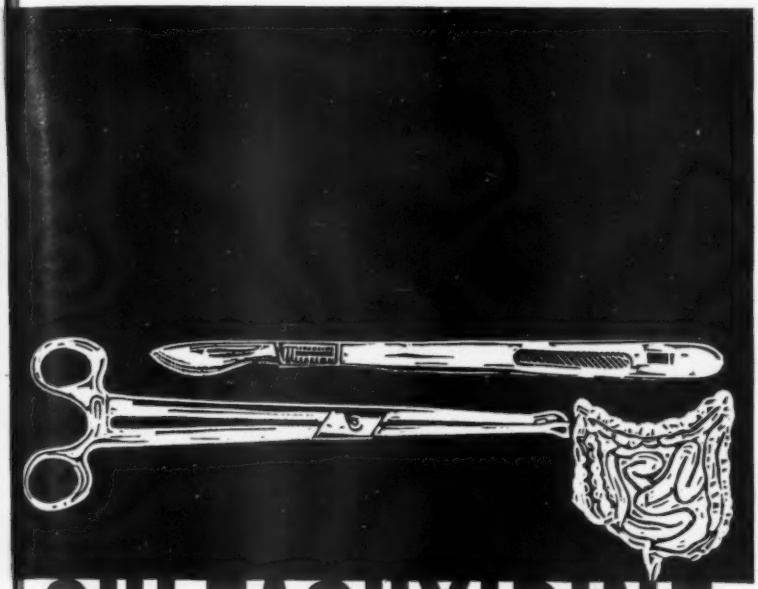
No individual can be expected to recognize in advance and with certainty every situation in his daily living which could make him liable to penalty under law. Even as a defendant in a civil or criminal suit, the average person cannot usually predict with any accuracy what the decision will be in his case. This is because of the many variables involved—and also because of the nature of human beings who have been put in the position of judging the past acts of others.

In the area of the doctor's liability, however, there is an explicit legal standard of conduct, one that every physician and surgeon must follow in treating a patient.

This is his guide—and by this he is judged.

Stated simply, the doctor must have a degree of learning and skill ordinarily possessed by physicians and surgeons in good standing in that or similar communities.

Furthermore, he must apply that skill and learning with reasonable



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care and according to his best judgment.

Unpredictable

The standard seems clear. However, the problem is how a judge and "twelve good men and true" will weigh a surgeon's past act against that standard.

Consider the case of a busy surgeon who performs a routine operation after which the patient dies. The patient's family put several surgeons on the stand who are critical of the defendant's procedures.

Other surgeons testify that the defendant's procedures were professionally sound.

The jury must believe one side. Suppose they believe the plaintiff's witnesses? The jury must then establish whether the criticized procedure was the proximate or direct cause of death or whether the patient would have died in any event. But can they and do they actually establish that? This is one of the numerous imponderables that confront a physician—indeed any citizen—once he becomes involved in a lawsuit.

As Learned Hand, one of our wisest and most respected judges, once said: "I must say that, as a litigant, I should dread a law suit beyond almost anything short of sickness and death."[1]

Unpredictable and imperfect as the human system of justice is, the body of decided court cases offers the surgeon useful, if not exact, guidelines to govern his professional conduct. If he follows sound medical practice and injury or death follows, the surgeon is not necessarily answerable in damages to the patient. Before the latter can win his suit, he must prove that

- *the surgeon departed from the standard of practice in the community, or, if he adhered to the standard, did so negligently and*
- *as a direct result of that departure or negligence, damage occurred.*

The law recognizes that physicians and surgeons work within certain limitations. Frequently, despite the exercise of skill and care, a cure is not effected.

Result

An unfavorable result by itself is not a basis for liability. Thus, in a recent case, four of a child's front teeth had become dislodged during a tonsillectomy. A Crow-Davis mouth gag had been applied by the anesthetist. The parents claimed that the injury to the teeth interfered with the normal development of the child's mouth. However, expert testimony revealed that the scientific reason was a physiological restriction of the mouth and not the loss of the teeth. Furthermore, the court found that there was no proof that the physicians failed to use proper procedures or were careless in their treatment. It therefore reversed a jury verdict of $5000 against the anesthetist.[2]

In another instance the court, after

holding that the plaintiff had not produced enough evidence of malpractice to go to the jury, dismissed the case and said: "It is a serious matter to charge a surgeon with malpractice. He should not be convicted on speculation or other than reasonable proof of the charge. He cannot be convicted for pure accident or for other results incident to his treatment if he was exercising the best approved methods known to medical science with care and diligence."[2]

Accident

The surgeon, operating after a diagnosis of acute appendicitis, found that the ascending colon and cecum were bound down by many adhesions. Other usual landmarks were obliterated and mesenteric lymph nodes were prominent. He was unable to find the appendix. An old abscess cavity was opened and explored but the walls were left intact. The cavity was filled with sulfa, all adhesions were freed, all bleeding controlled, a Penrose drain inserted as the abdomen was closed. The postoperative diagnosis was acute exacerbation of an old ruptured appendix or appendiceal abscess.

Fourteen days after the operation, the patient started to drain fecal material from the incision. The fistula did not heal after conservative treatment at home, and the surgeon recommended that the patient return to the hospital.

However, the patient discharged the defendant-surgeon and engaged another who in turn operated again. He then found a separation of the ascending colon from the cecum, though continuity was preserved as the area of separation was walled off by the omentum.

The second surgeon testified that the cecum was probably damaged during the first operation, although he could not say so with reasonable certainty. He added, however, that it is possible in the presence of an abscess, to incise the intestine inadvertently even though the usual practices and standards of the community are followed.

Furthermore, the transection of the colon could have resulted from the rupture of a diverticulum and it was not actually separated at the time the first operation was concluded.

It thus was shown that the result complained of could have occurred even with a competent surgeon using the instruments, methods and technique generally used by competent surgeons in that locality.[3]

Proving malpractice

Ordinarily, standing alone a bad result does not establish a malpractice case. The patient must prove by means of expert testimony the standard of practice in the community and that the defendant departed from it.

One court stated the rule as follows: "Before a physician or surgeon can be held liable for malpractice,

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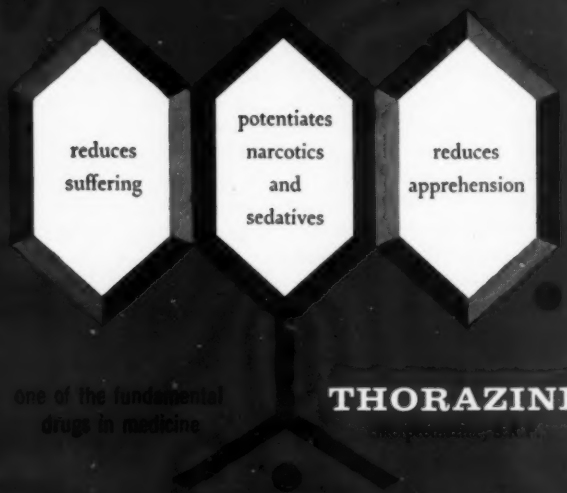

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e must have done something in the eatment of his patient which the ecognized standard of medical prac- ice in his community forbids in such ases, or he must have neglected to o something required by those tandards. In order to sustain a udgment against a physician or sur- eon, the standard of medical prac- ice in the community must be hown, and, further that the doctor ailed to follow the methods pre- cribed by that standard; . . . it is ot required that physicians and sur- eons guarantee results, nor that the esult would be what is desired; . . . negligence on the part of the physi- ian by reason of his departure from he popular standard of practice nust be established by medical testi- nony. *An exception is recognized n those cases in which negligence s so grossly apparent that a layman would have no difficulty in recogniz- ing it.*" (court's italics).[4]

A typical example of an instance when negligence can be shown with- out expert testimony is where a for- eign object is left in the body after an operation.[5] The court in these cases applies the doctrine of res ipsa loquitur (literally, the thing speaks for itself). The patient merely proves his injury, that it occurred without his fault, that it was caused by an instrumentality under the ex- clusive control of the defendant, and that such accidents do not ordinarily occur if due care is used. This raises an inference of negligence which the defendant must then rebut with con- trary evidence. If the defendant fails to do so, the jury is justified in deciding for the plaintiff.

Medical question

However, in order to receive the benefit of res ipsa loquitur, the sur- geon's dereliction must be the kind that is self-evident to the layman. For example, a surgeon removed two small polyps located at the apex of the patient's vocal cords. The patient merely showed that his voice before the operation was clear and resonant but became hoarse and low- pitched after it. He argued that the surgeon's negligence was apparent from the sound of his voice just as it would be if forceps were left in the abdomen.

The court rejected the plaintiff's argument, saying: "The ability of any layman to detect the bad condi- tion of plaintiff's voice may be grant- ed, but the cause of such a condition is a medical question, and not within the certain knowledge of laymen."[6]

Or is it?

The court's reasoning in this case seems clear. It is less clear, how- ever, in another case where a sur- geon accidentally perforated the patient's urethra. The surgeon ad- mitted in his testimony: "I must have made the opening myself in the process of the operation. I am only human." The court held that this was sufficient evidence of negligence for the case to be taken to the jury.[7] How do the facts of this case differ

from the one mentioned earlier, where the patient's colon was transected during an appendectomy? In that case the court held that the mere fact of the injury alone was not enough to show negligence without proof that it was caused by the defendant's departure from sound medical practice. These two cases demonstrate how different courts, applying the same broad principles of law, reach different conclusions in different situations.

Diagnosis

The law recognizes that physicians may differ over a diagnosis or treatment. The mere fact that a diagnosis later is proven incorrect does not by itself establish malpractice. It must be shown that the defendant's procedure was not in accor ance with standard practice in t community and that this failure w the proximate cause of the resulta damage.

During the first consultation, th surgeon gave the patient a cyst scopic examination and diagnose the condition as an enlarged prosta gland. The patient rejected surger Two years later another cystoscop examination disclosed a tumor whic was malignant at the base of th bladder. The patient sued the su geon for negligent diagnosis an treatment in failing to discover th tumor before it became malignan The court held that there was in sufficient evidence of a causal rel tionship between the failure to cyst scope and the cancer: "Prior cyst scopy might have revealed the tumo had it been there when the cyst scopy was performed. But it doe not follow that even if it were foun it could have been successfully re moved.

It may be conceded that becaus of defendant's failure to cystoscope plaintiff there had been no chance to eradicate the cancer. But it is a far cry from that to the conclusion that had the defendant cystoscoped the plaintiff the cancer could prob ably have been successfully eradi cated."[8]

Although it is the better practice for the surgeon to make his own diagnosis, he generally may rely on the diagnosis of the referring physi cian. He need not make an inde

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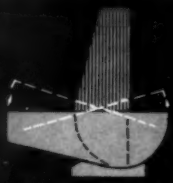

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pendent diagnosis before operating in the absence of information or condition which would put the surgeon upon inquiry as to the correctness of the physician's diagnosis and the advisability or necessity for the operation.[9]

Consent to operation

An operation upon a person without his consent, irrespective of the outcome, is a wrong for which a surgeon will be held liable.

However, courts are generally quite flexible as to what constitutes adequate consent.

Thus, it is universally agreed that no consent at all is required where an emergency requires immediate action to preserve a person's life or health and it is impracticable to obtain his consent or the consent of someone who is authorized to speak for him.

In addition, courts will sometimes go very far in implying consent from the conduct of the patient.[10]

The current trend is to abandon the rigid common law requirement of a formal or explicit consent. It is recognized that the rigid rule developed at a time when surgery was frequently performed in the home while the patient was conscious so that the physician was able to obtain the patient's consent for any unexpected extension of the operation. If the patient was unable, because of his condition, to consult with the physician his family was readily available to consent.

Extension

Today, of course, surgery is performed in hospitals while the patient is under anesthesia. The family, if in the hospital, is most usually in another part of the building. Furthermore, it is now understood that a complete diagnosis of an internal ailment is not made until an incision is made. It is therefore felt that it is unreasonable to hold a surgeon to the exact operation agreed upon after only a preliminary diagnosis.

The recent trend was followed in a North Carolina case, where a patient sued for injuries resulting from an unauthorized operation. The surgeon, while performing an appendectomy, discovered cysts on the ovary and punctured them. The patient alleged that as a result she developed phlebitis in her lower extremity. The court dismissed the case on the grounds that there was no proof that the puncturing of the cysts directly caused the phlebitis. It then acknowledged that the patient would be entitled to at least nominal damages if the extension of the operation was indeed unauthorized.

However, the court recalled the old Latin maxim, "Ratio est legis anima; mutata legis ratione mutatur et lex (reason is the soul of the law: the reason of the law being changed. the law is also changed).

The court then enunciated a more modern and realistic rule of consent: . . . "Where an internal operation is indicated, a surgeon may lawfully

perform, and it is his duty to perform, such operation as good surgery demands, even when it means an extension of the operation further than was originally contemplated, and for so doing he is not to be held in damages as for an unauthorized operation." The court revealed the underlying policy of its decision when it said: "The law should encourage self-reliant surgeons to whom patients may safely entrust their bodies, and not men who may be tempted to shirk from duty for fear of a law suit."[11]

Despite this liberal trend, however, the surgeon should still be cautious and obtain proper consent from his patient or the patient's family; he should also inform himself of the position of the courts of his particular state on the subject.

Broken needles

It is recognized that a certain percentage of surgical or hypodermic needles will break without anyone's fault. Therefore, the breaking of a needle is not, per se, a basis for liability if the needle was used with due care. Thus, for example, a needle should be inspected for obvious defects before it is used.

The time for informing the patient of a broken needle lodged in his body or the proper time for its removal depends upon the circumstances. However, it would seem to be clear malpractice to discharge the patient without informing him of the accident at all.[12] Similarly, it would be reckless to probe for the needle in certain sensitive areas without first having x-rays taken.

Foreign objects

The leaving of foreign objects, such as gauze sponges or instruments, in the body is the kind of act to which res ipsa loquitur is most typically applied. As the court said in one such situation, "Cases may arise where there is such gross negligence and want of skill in performing an operation as to dispense with the testimony of professional witnesses." That court was confronted with an extreme example of carelessness. The plaintiff, after an abdominal operation, complained of pain in her throat and a choking sensation. Her condition worsened, and she was unable to speak, so she wrote notes to the surgeon and hospital attendants. The surgeon then examined her pharynx several times and assured her that there was nothing wrong. He did not call in a laryngologist as the family had insistently urged. Her throat swelled externally, and her fingernails began turning blue.

About thirty-six hours after the operation, the patient brought in a laryngologist, who, in the presence of the defendant, removed from her throat a metal disk with two wire loops about four inches long left there by the anesthetist physician. The patient testified that the laryngologist remarked at that time, "This thing should never have happened,"

and, "I have heard of a lot of things . . . but this is the first G--- d--- time I have ever seen this."

The court in upholding a $5000 verdict for the patient, cited as sufficient evidence to support the jury verdict the fact of leaving the airway in the patient's throat. The defendant also failed to heed the patient's complaints and worsening condition.[16]

In another case the patient continually complained of abdominal pains for two years following an extra-uterine pregnancy. The defendant attempted to explain these at various times as gas, anemia or tilted uterus. Another operation disclosed a large cloth sack in the patient's large intestine, where it joins the small intestine. The court applied res ipsa loquitur which raised an inference of negligence against the surgeon.

However, he failed to produce sufficient evidence to rebut the inference. It was shown that the only operations that plaintiff had ever had were those two performed by the defendant. The latter denied that he had made an incision into the patient's intestinal tract. He agreed that it was inconceivable that the sack had entered the patient's intestine through her mouth. He suggested that it may have been inserted through her rectum, a fact that plaintiff denied. The court felt that this theory was too implausible to destroy the inference of negligence. Plaintiff therefore had enough of a case to go to the jury.[17]

It is less likely that the surgeon will be held liable for surgical gauze sponges left in the operated area. In general, it is the duty of the operating room nurses to keep a sponge count. In some states where this is shown, it is some evidence of the absence of negligence on the part of the surgeon, but it is not conclusive. In Massachusetts, however, the surgeon is completely absolved if it is the hospital's practice to hold the nurses responsible for the sponge count.[18]

Liability of volunteer

There is an old principle in the law to the effect that a person is under no legal duty to aid another in distress. However, if he does take action and is negligent, he is liable for any injury he causes thereby.

A surgeon was summoned from an adjacent room by two less experienced surgeons who were performing an exploratory laparotomy directed at the patient's gallbladder. The latter had made an incision in the upper right quadrant of the abdomen and found a diseased gallbladder. Looking further, they found a tumor on the sigmoid colon in the lower left quadrant. They therefore summoned the defendant who confirmed that the tumor was malignant and that its removal was more important than the gallbladder. The defendant agreed to help with the excision without the knowledge of the patient and without compensa-

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tion. The patient later sued all three surgeons for leaving a hemostat, a six-inch Kelly clamp, in the upper right quadrant of his abdomen.

The first two surgeons made a settlement with the patient before trial, so that only issue remaining was the liability of the volunteer. The court applied the doctrine of res ipsa loquitur, which raised an inference of negligence against the defendant. However, he won the case because he produced sufficient evidence to rebut the inference. All the surgeons testified that the defendant did not touch the upper right quadrant, but confined his attention to the lower left quadrant where the tumor was located. It was also shown that the defendant did not use Kelly clamps, but used curved clamps exclusively.[16]

Hospital personnel

As a general rule, a surgeon is not liable for the negligence of interns, anesthetists, nurses and other aides on the staff of a hospital. This is not true, however, once the surgeon begins to give specific instructions to an employee of the hospital or when he exercises control over the details of the employee's work.

A parent sued a surgeon for causing the death of a child with an overdose of ether administered by a nurse in connection with a tonsillectomy. The trial judge dismissed the case on the grounds that the negligence of the nurse could not be imputed to the surgeon.

The appellate court reversed that decision, saying that, although the nurse was an employee of the hospital, there was enough evidence that the surgeon had exercised full power over the attending nurses so as to make him responsible for the improper administration of the anesthetic.[18]

In another case a patient claimed that she received chemical burns on her back during an operation. The court held that res ipsa loquitur did not apply because control over the chemicals was exercised by hospital personnel. The plaintiff selected the hospital, and the hospital's employees prepared the patient for the operation. Therefore, if res ipsa loquitur applied at all, it did so to the hospital alone.[19]

While the surgeon was scrubbing up in an adjacent room, the patient

fell off the operating table as the nurse was adjusting the stirrups. The liability of the hospital hinged on whether the nurse, while performing that act, was the agent of the surgeon or of the hospital.

The court said that the following evidence introduced by the plaintiff, if believed by the jury, would make the nurse the agent of the hospital. The surgeon was the plaintiff's family doctor and on the staff of the hospital; the nurses were assigned to him by the hospital, and he could not reject them; the surgeon was not actually supervising the nurse when the injury occurred. Apparently, what swayed the court to a large extent, was the common knowledge that the preparation of a patient for surgery in the hospital operating room is usually done by the hospital's nursing staff and the charges for that are part of the hospital's, not the surgeon's fees.[20]

A patient was injured by the explosion of an anesthetic machine caused by static electricity. The court refused to apply res ipsa loquitur against the surgeon and dismissed the case against him. It appeared that he possesed the required skill and applied it with due care. The machine was under the complete control of the anesthetist, who was selected by the anesthesiological staff of the hospital. It was also shown that it was not a customary duty of the operating surgeon to inspect the anesthetist's equipment. The only duty of the surgeon is to wear clothing that is least likely to generate static electricity. However, the court affirmed a verdict against the hospital, although it reduced it from $30,000 to $15,000. It was shown that although the anesthetic machine had rubber tires, it had no drag chain with which to drain off static electricity. The court applied res ipsa loquitur against the hospital. This raised an inference of negligence which the hospital could not rebut by showing that it was not the lack of a drag chain that caused the explosion. This the hospital failed to do.[21]

Addiction to drugs

A physician must exercise a high degree of care in prescribing morphine. He may be held liable for any resulting addiction even if the patient lied about pain in order to get the drug.

A woman entered the hospital for surgery three times in the course of a year. She received pain-killing drugs each time. The defendant, who performed only one of these operations continued to treat her after her final discharge. The patient complained of pain and the surgeon continually perscribed morphine. About three months after her discharge another surgeon again operated and then discovered that she was addicted to morphine.

At the trial it was shown that the patient had begun to lie about the existence of pain in order to obtain more morphine. However, it

was also shown that the defendant had assured the family that it was all right to give the patient the drug whenever she felt the need for it.

The defendant argued that the patient was contributorily negligent in continuing to ask for the drug despite the fact that she felt she was becoming addicted to it. The court rejected this argument and affirmed a jury verdict for the patient. Even if the patient knew at what point addiction began, she had a right to rely on the defendant's professional skill and judgment. It would be otherwise, however, had she consulted another physician who warned her of the danger of addiction and then she nevertheless continued to take the drug.[14]

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Reciprocity is given to foreign graduates who hold licenses in states with which Wisconsin reciprocates — if the graduate meets all other

licensing requirements. Wisconsin also grants licenses by reciprocity to those having Armed Forces service, providing an applicant can meet all regular licensing requirements, has served at least one year as a medical officer and appears at a meeting in application within a year following his honorable discharge.

For further information write to: Dr. Thomas W. Tormey, Jr., Secretary, State Office Building, 1 W. Wilson St., Madison, Wisconsin.

WYOMING

The Wyoming Board of Medical Examiners does not accept for examination those applicants who are graduates of foreign medical schools.

ALASKA

Any applicant for a license to practice medicine in Alaska requires the following:

- Full U.S. citizenship.
- Graduation from a medical school that, at the day of graduation, has not less than the requirements of the Association of American Medical Colleges. Alaska uses the list furnished by the American Medical Association of its fully approved medical colleges.
- Certificate and testimonial of good moral character.
- Hospital training of at least one year as an intern or resident in a recognized hospital unless he has been a licensed physician engaged in the profession for a term of four years.
- A Basic Science Certificate from the Territory of Alaska.
- Reciprocity — if the applicant holds a license by examination in any state in the United States which recognizes licenses from Alaska, and if the applicant presents a certificate that he is qualified to practice medicine and surgery in the state issuing the license, then at the discretion of the Board of Medical Examiners of Alaska, he may receive a license to practice medicine and surgery.

For further information write to: Dr. W. M. Whitehead, Secretary, 172 S. Franklin St., Juneau, Alaska.

CANAL ZONE

The Canal Zone does not permit graduates of foreign medical schools to take its licensure examination.

GUAM

Guam requires that a foreign graduate be a graduate of a school approved by the AMA.

He also must have taken an internship in the United States.

Reciprocity is given and citizenship is not required. For further information write to: Dr. S. J. Provencher, Acting Secretary, Marianos Islands, Agana, Guam.

HAWAII

The Territorial Board of Medical Examiners requires that a foreign graduate:

- Be a citizen of the United States; or if not a citizen of the United

States, has declared his intention to become a citizen of the United States as provided by law.

- Has been a resident of the Territory for at least one year; except that a person who has changed his residency to the Territory shall have been continuously physically present in the Territory for at least nine months of his legal residence in the Territory.
- Be of good moral character.
- Be a graduate of a medical school or college approved by the Council on Medical Education and Hospitals of the AMA, or in lieu thereof, has actively practiced, either in some other jurisdiction or in the United States Army or Navy or Public Health Service, as a licensed physician of medicine or surgery for ten of the eleven years immediately preceding the date of application to take such examination.
- Has served an internship of at least one year either in a hospital which has been certified or approved for the training of interns and resident physicians by the Council on Medical Education and Hospitals, or if outside the United States, in a hospital which is shown by the applicant to the satisfaction of the Board of Medical Examiners to possess standards substantially the equivalent of those required for such American Medical Association approval.
- Has visited a Territorial institution devoted to the care of patients suffering from Hansen's disease and is possessed of a written statement from the physician in charge that he is familiar with the general clinical manifestations of Hansen's disease.

For further information write to: Dr. I. L. Tilden, Secretary, 1020 Kapiolani St., Honolulu, Hawaii.

VIRGIN ISLANDS

The Virgin Islands requires that a foreign graduate be a graduate of a medical school approved by the AMA.

An internship in the U.S. is required.

Citizenship is not necessary. Must reside in the Virgin Islands for at least six months prior to application.

For further information write to: Dr. Earle M. Rice, St. Thomas, Virgin Islands.

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WASHINGTON REPORT

Current news items of special interest to residents, interns and reserve medical officers, as reported directly to your journal by the Army, Air Force, Navy, Public Health Service and Veterans Administration.

Air Force

INTERN ALLOCATION . . . Of the 1003 draft-liable interns allocated to the Air Force this fiscal year by the Department of Defense (through July 1958), 99.8% of the interns indicated Air Force as their first choice.

Of further interest is the fact that 77% of all senior medical students who participated in the program were allocated to the service of their first choice.

The 0.2% allocated to the Air Force for whom the Air Force was second choice were interns who had asked for Army commissions and deferments in general practice; these were allocated to the Air Force because the Army could not accommodate their requests.

Of the 1003 interns allocated, more than 700 had submitted their applications for Reserve commissions by the deadline date, 1 December 1957.

Since the fall of 1954 when the Department of Defense with the assistance of the Selective Service System initiated the Armed Forces Reserve Medical Officer Commissioning and Residency Consideration Program, young physicians with unfulfilled service obligations have had an opportunity to plan professionally and service-wise. Through this volunteer program they have been able to apply for and receive a Reserve commission with, in most instances, the service of their choice,

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and to come to active duty within the fiscal year following completion of their intern training. (The fiscal year, July to June, coincides with the usual academic year.) Further, they have had the possibility of choosing and being selected for residency deferment within the specialty requirements of their chosen military departments if they did not prefer active duty upon completion of their internship.

The Air Force this year plans to defer more than 200 physicians under the plan. Deferments are on a year-to-year basis, until residents are board-eligible in their specialties, based upon the approval of their training hospitals and upon the continued needs of the particular service.

The Air Force, in supporting the program from its inception, has recognized the planning value to the individual physician, to the military department, to Selective Service, and to the training institutions. It is anticipated the voluntary program will again be in operation for 1958 medical school graduates.

Navy

QUALITY CAREER . . . RESIDENT PHYSICIAN has been given permission to publish a recent letter sent to the chairman of the AMA's Council on National Defense, Dr. Harold S. Diehl. We put it under our heading "Navy" because it was written by a naval medical officer about his active duty:

The University of North Carolina
The School of Medicine
Department of Medicine
Dr. Harold S. Diehl, Chairman
Council on National Defense
American Medical Association
535 North Dearborn Street
Chicago 10, Illinois

"Dear Dr. Diehl:

I have just completed a questionnaire of your committee for former Armed Forces medical officers, and I feel so strongly about the nature of the experience that I want to communicate it directly to you. The following is my comment on the last page of the questionnaire.

"Though drafted reluctantly ten years after graduation from medical school, for which I paid myself, and during and after which I was said to be physically unfit for military service, I had a pleasant and profitable 27 months of active duty in the U. S. Naval Reserve. I developed high respect for the members of the Navy Medical Service in the positions of greatest responsibility and found the quality of medical practice wherever I had the opportunity to inspect it throughout the Navy

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as good as or better than the average of civilian medical practice as I have seen it. I was not called upon to perform non-professional duties, and the paper work and administrative aspects of my work occupied less time than in civilian life.

"At the time of my entering the service, I was convinced of the need for medical officers in the Navy and realization of this need soon dissipated my resentment at being called away from my family and civilian career.

"The American Medical Association would perform a service to young doctors and to the entire nation by a program of active encouragement of doctors entering upon their life work to consider the advantages of a career in government medical service.

"Because of my civilian commitments, I could not consider a military medical career for myself, but my period of service was so rewarding that I want to go on record with the American Medical Association among the others who have found their military duties profitable."

Isaac M. Taylor, M.D.
Assistant Professor of Medicine

Army

PREVENTIVE MEDICINE . . . The Army currently offers residencies in the field of preventive medicine, a specialty of great importance to the Army Medical Service.

Specialty training in the field begins with an academic year of attendance at a recognized university school of pubic health, leading to the degree of Master of Public Health. The second year is spent as a resident in an AMA approved civilian public health residency, usually at a large state or county health department. Here the resident observes and participates in an active program of public health practice, including epidemiological investigations, communicable and chronic disease control, maternal and child health, hospital administration, and sanitary control of the environment.

Between the second and third year of the residency, officers will attend a three months advanced course in military preventive medicine at the Walter Reed Army Institute of Research in Washington, D. C. During the third year of training each officer will be stationed at a large military post as a resident physician in preventive medicine. Here he will participate, under the supervision of a board certified preventive medicine officer, in an active preventive medicine program in a combined military-civilian type community.

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No. patients and length of follow-up	37 11 mo.	27 13 mo.	16 9 mo.	21 11 mo.
Results:				
Good to excellent	51%	74%	56%	76%
Fair to poor	49%	26%	44%	24%
Recurrences:				
None	16%	22%	13%	19%
Few	46%	48%	50%	57%
Same	38%	38%	38%	24%
Complications:				
Hemorrhage	5%	7%	19%	9.5%
Perforation	0%	4%	0%	0%
Obstruction	0%	4%	0%	0%
Surgery needed	3%	4%	6%	0%
Side effects:				
Oral	38%	78%	25%	14%
Visual	11%	48%	6%	0%
Sphincter	11%	15%	0%	0%

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1. After Cayer, D.: Prolonged anticholinergic therapy of duodenal ulcer, Am. J. Digest. Dis. *1*:501 (July) 1956.

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The editors of *Resident Physician* went looking for the answers —and for the first time have brought together the fascinating, personal stories of the men who worked to establish today's pharmaceutical companies. Many never-before-published incidents in the lives of the founders of present-day drug companies are contained in these word and picture biographies.

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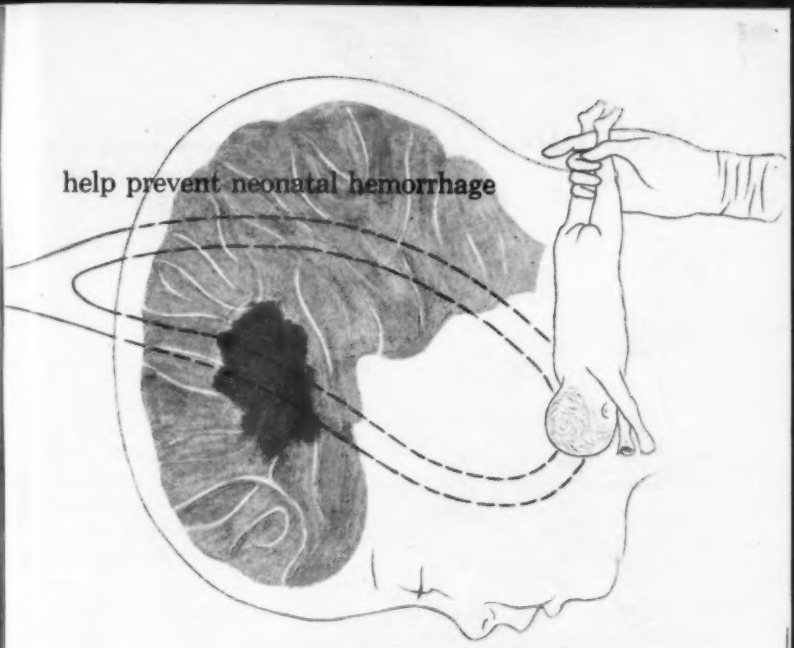

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*Council on Pharmacy and Chemistry: New and Nonofficial Remedies, Philadelphia, J. B. Lippincott Co., 1956, p. 505.

Mediquiz

Questions are from a civil service examination given to candidates for physician appointments in municipal government.

Answers on page 164.

1. The drug of choice in the treatment of ascariasis is: (A) santonin; (B) hexylresorcinol; (C) tetrachloroethylene; (D) oil of chenopodium.

2. A man falls astride an obstruction receiving injury to the perineum. Subsequently he is unable to void, his temperature is elevated and there is a gradual increased swelling of the perineum and genitalia. The most likely injury is: (A) contusion and hemorrhage of perineal muscles; (B) hematocele of the scrotum; (C) rupture of the urethra; (D) rupture of the bladder.

3. A 36 year old man complains of attacks of palpitation at night. These are accompanied by dyspnea and epigastric and lower chest discomfort. The only method of relieving these symptoms has been for him to stand up and walk about the room. Fluoroscopic examination with barium swallow reveals the stomach bubble high in the left chest. Of the following, the most likely cause of the attacks is: (A) arteriosclerotic heart disease with left ventricular failure; (B) duodenal ulcer; (C) hiatus hernia; (D) gall bladder disease.

4. A 64 year old male with chronic pulmonary emphysema is admitted with acute pneumonia, is deeply cyanotic, and is immediately placed in an oxygen tent. He is maintained in a high oxygen atmosphere continuously for four days, at which time he is noted to go gradually into coma with a respiratory rate of 6 per minute, and to become increasingly cyanotic. The carbon dioxide content of the arterial blood was found to be 90 volumes per cent. Correct treatment for this man is: (A) Administration of caffeine sodium benzoate; (B) immediate removal from the oxygen tent and the

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use of intermittent oxygen only; (C) increase in penicillin dosage; (D) administration of aureomycin.

5. Cortisone as treatment for rheumatoid arthritis: (A) should be routinely used; (B) cannot be dangerous; (C) should never be used; (D) should be beneficial in some cases.

6. Of the following, the best agent in the treatment of faucial diphtheria is: (A) streptomycin; (B) diphtheria antitoxin; (C) penicillin; (D) sulfadiazine.

7. The one of the following diseases which is least likely to be confused with acute cholecystitis in a 40-year old man is: (A) mesenteric adenitis; (B) pancreatitis; (C) right lower lobe pneumonia; (D) myocardial infarction.

8. Of the following diseases, the one for which there exists an effective method of active immunization is (A) bacillary dysentery; (B) measles; (C) malaria; (D) yellow fever.

9. The one of the following findings which would be an indication of failure of medical management of a duodenal peptic ulcer is: (A) repeated recurrence of pain when antiacid therapy is withdrawn; (B)

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THE UNEXCELLED
ANTIHISTAMINE

recurrence of subjective symptoms of ulcer under severe stress; (C) gastric dilation with delayed emptying; (D) persistent fasting hyperacidity.

10. The one of the following which is the most appropriate drug for the treatment of acute gouty arthritis in the early state is: (A) liver extract; (B) penicillin; (C) colchicine; (D) alcohol.

11. The characteristic murmur of aortic insufficiency is: (A) low-pitched and rumbling; (B) high-pitched and blowing; (C) heard best with the patient supine; (D) heard best at the apex.

12. Urobilinogen in the urine is most likely to be absent in: (A) cirrhosis of the liver; (B) acute yellow atrophy of the liver; (C) adenocarcinoma of ampulla of Vater; (D) gallstone in cystic duct.

13. Rheumatic fever in a susceptible population is most likely to occur following an outbreak of: (A) influenza; (B) scarlet fever; (C) the common cold; (D) meningitis.

14. A stocky laborer feels sharp pain in his right shoulder as he is lifting a heavy crate. On examination, patient has moderate pain and soreness in the right shoulder and is unable to abduct the arm more

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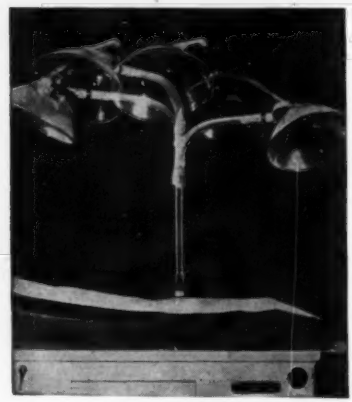

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than 15°. The shoulder can be moved passively through most of the normal range. The most likely diagnosis is: (A) impacted fracture of neck of humerus; (B) acute subdeltoid bursitis; (C) rupture of the long head of the biceps; (D) rupture of the supraspinatus tendon.

15. The proper treatment of the patient described in Question 41 is: (A) baking and massage; (B) immobilization in a Velpeau's bandage; (C) support of arm on airplane splint; (D) exploratory operation and repair of injured structures.

16. The etiology of arteriosclerosis obliterans is: (A) unknown; (B) metabolic; (C) infectious; (D) mechanical.

17. In treating phlebitis; anticoagulant therapy is contra-indicated in: (A) the presence of a fracture of long bone; (B) the first two weeks following the operation; (C) cerebral hemorrhage; (D) pulmonary infection.

18. The etiology of Raynaud's disease is: (A) inflammatory; (B) neoplastic; (C) functional.

19. Hyperuricemia exists in gouty patients: (A) always; (B) never; (C) usually; (D) rarely.

20. The joint pathology most characteristic of rheumatoid arthiritis is:

(A) cartilage degeneration; (B) inflammation of the synovium and joint capsule; (C) eburnation of subchondral bone; (D) osteophytic proliferation.

21. Radioactive iodine uptake in excess of 35 per cent is usually observed in the course of: (A) acute thyroiditis; (B) myxedema; (C) iodine therapy; (D) thyrotoxicosis.

22. The pathological changes in acute thromboangiitis obliterans are: (A) degenerative; (B) inflamatory; (C) functional; (D) neoplastic.

23. A petechial eruption is most likely to be found in: (A) H. influenzae meningitis; (B) typhoid fever; (C) meningococcus meningitis; (D) coccidioidomycosis.

24. In diabetic acidosis treated with glucose, insulin and fluids, weakness and low T-waves in the electrocardiogram suggest: (A) low serum potassium levels; (B) acidosis; (C) hypoglycemia; (D) low serum carbon dioxide combining power.

25. Sensitivity to insulin is seen frequently in: (A) Cushing's syndrome; (B) diabetes insipidus; (C) hyperthyroidism; (D) Addison's disease.

26. A convulsion following olfactory hallucinations suggests: (A) an intranasal tumor extending intra-

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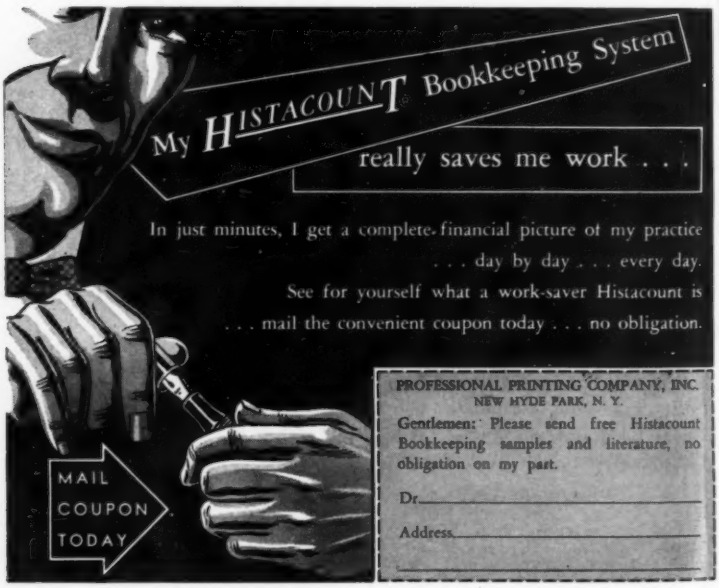
cranially; (B) a lesion of both olfactory bulbs; (C) a lesion of one olfactory bulb; (D) a temporal lobe lesion.

27. Five days after a severe head injury, a man develops progressive proptosis of one eye. The most likely cause of this condition is: (A) fracture of supraorbital ridge; (B) retrobulbar hematoma; (C) arteriovenous cavernous sinus fistula; (D) massive hematoma into sphenoid and ethmoid sinuses.

28. In a young male patient with a single painless nodule in the thyroid gland the most advisable management is: (A) observation for evidences of enlargement or until other nodules appear; (B) simple excision; (C) the administration of radioactive iodine; (D) thryoidectomy-subtotal.

"MEDIQUIZ" ANSWERS

1(B), 2(C), 3(C), 4(B), 5(D), 6(B), 7(A), 8(D), 9(C), 10(C), 11(B), 12(C), 13(B), 14(D), 15(D), 16(A), 17(C), 18(C), 19(C), 20(B), 21(D), 22(B), 23(C), 24(A), 25(D), 26(D), 27(C), 28(D).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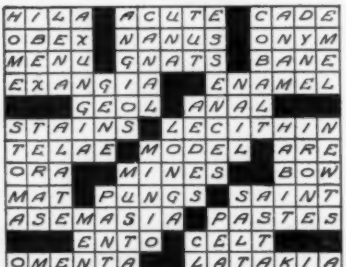
Aloe Co., A. S. 151
American Cyanamid Co. Surgical Products Division 18, 129
Ayerst Laboratories 4, 6, 127
Bauer & Black 35
Baxter-Travenol Laboratories ... 38
Birtcher Corp., The 33
Bristol-Myers Co. 22
Burroughs Wellcome & Co. 34
Castle Co., Wilmot 162
Ciba Pharmaceutical Products, Inc. 3
Colwell Publishing Co. 167
Department of the Army 20
Eaton Laboratories 93
Endo Laboratories 115
Lakeside Laboratories 159
Lederle Laboratories, Division of American Cyanamid Co. 41, 42, 43, 117, 141, 155
Lilly & Co., Eli 44
Lloyd Brothers 24, 25
McNeil Laboratories, Inc. 45, 111, Cover 3
Massengill Co., The S. E. between pages 122 and 123
Mead Johnson & Co. .....Cover 4
Merck Sharp & Dohme, Division of Merck & Co. 16, 131, 157
Mutual Benefit Life Insurance Co. 153
National Drug Co., The 1
Nepera Laboratories 145
Organon, Inc. 8
Ortho Pharmaceutical Corp. ...37, 99
Parke, Davis & Co. 27
Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc. 39
Physicians Casualty Assn. of America 168
Picker X-Ray Corp. 137
Professional Printing Co. 164
Robins Co., Inc., A. H. 160, 161
Roche Laboratories, Division of Hoffmann-LaRoche Inc. between pages 18 and 19; 46
Saunders Co., W. B. 149
SchenLabs Pharmaceuticals, Inc. 30, 31
Schering Corp. 15
Searle & Co., G. D. 97
Smith, Kline and French Laboratories 40, 101, 134
Squibb & Sons, E. R., Division of Olin Mathieson Chemical Corp. 12
U. S. Vitamin Corp. 95
Upjohn Co. ..between pages 34 and 35
Warner-Chilcott Laboratories Cover 2, 163
White Laboratories 125
Wyeth Laboratories 10, 19, 86, 87, 107, 113, 121

RESIDENT RELAXER

(puzzle on page 21)



VIEWBOX DIAGNOSIS

(from page 17)

CARDIOSPASM

Note the marked widening and redundancy of the entire esophagus with marked persistent narrowing at its junction with the stomach below the diaphragm.

... 1
... 145
...
..37, 99
... 27
of
... 39
... 168
... 137
... 164
160, 161
of
l 19; 46
... 149
. 30, 31
... 15
... 97
101, 134
of
rp. 12
... 95
l and 35
er 2, 163
... 125
113, 121

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